

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1821.—Vol. XL.

LONDON, SATURDAY, JULY 16, 1870.

(WITH SUPPLEMENT) {STAMPED .. SIXPENCE.
UNSTAMPED.. FIVEPENCE.

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(ESTABLISHED 1842.)
HOLDERS of mining shares DIFFICULT OF SALE in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.
Mr. CROFTS recommends for immediate purchase ROOPE CONSOLS (Tin) shares. At the latter mine large quantities of rich tin stuff are being laid open, and a valuable mine developed.
Every description of shares BOUGHT and SOLD at NET prices.
Bankers: Metropolitan Bank.

MR. W. H. BUMPUS, STOCK AND SHAREDEALER,
44, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following SHARES, free of commission:—
150 Anglo-Argentine, 20s. 5 East Lovell, £32½. 25 Port Phillip, 15s.
100 Anglo-Austral, 13s 6d. 20 East Seton, 20s. 50 Rossa Grande, 8s. 6d.
20 Asheton, £2½. 25 Frank Mills, £23½. 25 So. Condurrow, £23½.
20 Australian, £23 3d. 20 Frontino, 16s. 6d. 15 Sweetland Ck., £23½.
20 Anglo-Brazilian, 7s. 20 Gen. Brazil, 13s. 9d. 75 Taquaril, 17s. 6d.
20 Bwiche Consols, £33½. 10 Gt. Laxey, £18½. 15 Tankerville, £15½.
15 Bradford, £23½. 10 Gt. No. Laxey, 7s. 6d. 30 Tan-yr-Allt, £22½.
25 Bwadrain Con., 28s 9d. 5 Great Vor, £11½. 3 Van, £7½.
20 Caldbeck Fells, 24s 6d. 50 Harewood Con., 3s 9d. 40 Van Consols, £23½.
20 Chontales, 10s. 6d. 10 Marke Valley, £23½. 25 West Maria, £23 9d.
25 Caesynon, £23½. 15 North Crofty, £23 9d. 20 W. Tankerville, £23½.
10 Carn Camborne, 24s 6d. 100 Nanteco Cons., 15s. 9d. 5 W. Chiverton, £24½.
10 Don Pedro, £3 1s. 3d. 60 North Trekerby, 9s 6d. 70 W. Pant-y-Go, 12s 9d.
20 Drake Walls, 28s. 10 New Lovell, £23½. 5 W. Kitty (St. Agnes), £7½.
20 Eclipse, 15s. 20 Pacific, £7. 15 Wheal Agar, £2 13s 9d.
10 E. Grenville, £3 3s 9d. 50 Pen'Alit, 31s. 3d. 30 Yudanmutana, 12s 6d.
200 Excelsior, 4s. 20 Pestarena, 19s.
15 East Caradon, £23½. 20 Pestarena, 19s.
W. H. Bumpus business in every description of shares at the best market prices, and free of commission.
Daily Price-List free on application.
Bankers: The Metropolitan Bank (Limited), Cornhill, E.C.

MR. WILLIAM WARD,
95, BISHOPSGATE STREET WITHIN, LONDON, E.C.

JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER,
48, THREADNEEDLE STREET, LONDON, E.C.
Bankers: London and Westminster, Lothbury.

MR. Y. CHRISTIAN, STOCK AND SHAREDEALER,
11, ROYAL EXCHANGE, E.C.
Bankers: Bank of England.

MR. T. A. MUNDY, STOCK AND SHAREDEALER,
38, BISHOPSGATE STREET WITHIN, E.C.
Bankers: City Bank.

MR. JOHN MOSS, STOCK AND SHAREDEALER,
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.
Bankers: City Bank, Finch-lane, E.C.

MR. C. A. POWELL, BRITISH AND FOREIGN STOCK AND SHAREDEALER,
No. 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.
Bankers: City Bank, Finch-lane.

MESSRS. A. STUART AND CO., 93, BISHOPSGATE STREET WITHIN, LONDON, E.C.

Established upwards of Twenty Years in Cornwall and London.
MR. J. R. PIKE, STOCK AND SHAREDEALER,
3, CROWN CHAMBERS, THREADNEEDLE STREET.

MR. THOMAS ROSEWARNE, SHAREDEALER,
81, OLD BROAD STREET, LONDON, E.C.
T. R. has business in all the leading mines in Wales, Devon, and Cornwall, and a seller of many of the Welshers for time on much below the market prices. Call at my office from Ten to Four o'clock.
WANTED TO BUY:— 50 West Drake Walls.
50 East Caradon. 200 Bedford Consols. 7 South Frances.
50 Marke Valley. 15 Wheal Seton. 130 Gawton.
Money advanced to any extent on good mining shares.
Bankers: Bank of England.

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, LONDON, E.C., DEALS in all descriptions of ENGLISH and FOREIGN SECURITIES, either for immediate cash or the fortnightly settlement.
Recommends the purchase of shares in the VAN MINE, undoubtedly the richest and the safest investment known.
W. T. has business in Carn Bre shares, and pays particular attention to the Brazilian and Californian Gold Mine shares. From his long residence in the Brazil he is able to afford full information as to the prospects of the gold mines of that country.

MR. HENRY MANSELL, STOCK AND SHAREDEALER,
1, PINNER'S COURT, OLD BROAD STREET, LONDON.

Mr. H. M. has the following SHARES left with him FOR SALE, and solicits offers for the same, or any part:—
50 Harewood Consols. 50 West Pant-y-Go. 100 Excelsior.
10 Trelawny. 50 Bryn Royaltan (fully paid). 25 Hammett.
10 Holmshush and Kelly (fully paid). 10 Liernog. 15 Aberdaunt (fully paid).
20 West Stiperstones. 20 South Herodsfoot. 50 Nanteco Consols.
20 Great Retailack. 20 Virtuous Lady.
Mr. HENRY MANSELL recommends the following shares as safe investments at present prices:—Great Vor, West Jewell, Terras, Van Consols, West Esgrail-Lie, and Cefn Consols. All particulars on application.
Bankers: London Joint-Stock Bank. References exchanged.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 16 years), has FOR SALE the FOLLOWING SHARES, at net prices:—
Aberdaunt, 24s. 9d. 20 Eberhardt, £3 8s 9d. 5 Marke Valley, £7 19s.
100 Australian, 44s 9d. 200 Excelsior, 3s. 9d. 20 North Pool, 24s.
20 Anglo-Brazilian, 7s 3d. 5 East Lovell, £32½. 25 No. Crofty, £3 1s.
20 Anglo-Argentine, 18s 9d. 15 East Caradon, £5. 20 New Lovell, 68s. 6d.
20 Asheton, £5 12s. 6d. 10 East Bassett, £5½. 100 Pestarena, 19s. 3d.
25 Bwiche Consols, £33½. 100 East Seton, 20s. 9d. 20 Pacific, £2½.
20 Bradford, £23½. 100 Eclipse, 1s. prem. 2 Providence, £39½.
25 Bwadrain Con., 28s 9d. 20 E. Rottle Hill, 3s. 6d. 50 Pen'Alit, 29s.
20 Budnick Consols, 29s. 20 Falmouth & Gibraltar Teleg., £5 19s 6d. 50 Prince of Wales, 15s 6d.
20 Chontales, 10s. 3d. 20 Falmouth & Gibraltar Teleg., £5 19s 6d. 50 Princess of Wales, 9s 9d.
20 Cefn Consols. 25 Frank Mills, £23½. 30 Plynlimmon, 44s.
20 Caesynon, 57s. 3d. 50 Frontino, 16s. 20 Rosewall Hill, 31s. 3d.
20 Chiverton Moor, £24½. 20 Gen. Brazil, 14s. 9d. 20 Rhydallog, 51s.
20 Carn Camborne, 24s 6d. 20 Great Laxey, £18½. 20 Sweetland Ck., £23 9d.
20 Caldbeck Fells, 24s 6d. 10 Great Vor, £11½. 25 So. Condurrow, 50s.
20 Cook's Kitchen, £20 ex div. 20 Gt. No. Laxey, 7s. 3d. 5 Tankerville, £15 8s 9d.
50 Don Pedro, 46s 9d pm. 20 Gonaamena, 2s. 9d. 3 Tincroft, £34.
1 Devon Cons., £103½. 2 Herodsfoot, £41½. 20 Tavarone.
50 Drake Walls, 28s. 9d. 50 Hington, 11s. 3d. 3 Van, £7½.
50 West Pant-y-Go, 15s. 50 Harewood Con., 3s 9d. 20 Van Consols, £3 8s 9d.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 21 years), is a SELLER at net prices of:—
10 Plynlimmon, 10 Tankerville, 25 Bwiche Consols, 30 Polbreen, 20 New Pembroke, 20 Hammett, 30 Pacific, 120 West Pant-y-Go, 25 East Grenville, 35 West Tankerville, 15 Frank Mills, 50 Okei Tor, 75 Nanteco Consols, 40 South Darren, 50 South Frances, 35 Great South Chiverton, 100 East Chiverton, 70 Great South Teigh, 50 Spearan Moor, 50 West Jewell, 40 North Herodsfoot, 130 South Grenville, 50 Sedmore, 10 Wheal Kitty (St. Agnes), 2 Minera, 5 Wheal Seton, 20 Mac-y-Safn, 5 Wheal Crebor, 10 Asheton.
Mr. BUDGE advises investors to secure an interest in Bwadrain Consols. He states that he does not know another mine making equal return, and being open such reserves, or so favourably situated, the shares of which are being sold at anything like the price. There were sold on the 9th inst. 30 tons of ore.

TANKERVILLE, WEST TANKERVILLE, AND OTHER WELSH LEAD MINES.
EAST WHEAL LOVELL, AND OTHER CORNISH MINES.
IMPORTANT TO SHAREHOLDERS AND OTHERS.
PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," &c., of Friday, July 15, No. 291, price 6d, each copy, forwarded on application, contains information on the following mines:—
Tankerville. East Wheal Seton. Van.
West Tankerville. East Wheal Lovell. Asheton.
North Crofty. Great Wheal Vor. Tan-yr-Allt.
Great Western. West Drake Walls.

MR. PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON, E.C.
Bankers: The Alliance Bank, and Union Bank of London.

MR. EDWARD COOKE, STOCK AND MINING SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.
Bankers: Alliance Bank.

MR. JAMES STOCKER, STOCK AND SHAREDEALER,
31, THREADNEEDLE STREET (and Mining Exchange), LONDON, E.C.
Bankers: London and Westminster, Lothbury.

MR. W. H. CUCULL,
No. 42, CORNHILL, LONDON, E.C.
Daily price-list on application.

MR. WILLIAM SEWARD, STOCK AND MINING SHAREBROKER,
19, THROMMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market prices.

Twenty-six Years' Experience.
MR. F. W. MANSELL, STOCK AND SHAREDEALER,
BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 85, GRACECHURCH STREET, LONDON, E.C.
Telegraphs, Railways, Insurance, Banks, Canals, Hotels, Mines (home and abroad), Steam-ships, &c., together with every other description of Stocks, Bought or Sold for cash or fortnightly settlement.
Our long experience has taught us to deal with caution. We act accordingly. Investors can make money, and for safety they should do their business only through us.
We advise capitalists and investors to make immediate application for shares in the Terras Tin Company (Limited) and the Aberdaunt Lead Mining Company (Limited). The Terras, in Cornwall, will rise to as many pounds as they are now selling for shillings. The Aberdaunt and the Gelfron Mining Companies (Limited) are on the celebrated Van Lode in the same district. Similar successful results are anticipated, and it is believed that these two mines will prove to be the next great prizes in Montserratshire.
Letters and telegrams receive prompt attention.
Prospectuses of the Terras and Gelfron may be had on application as above.
ENDEAN AND CO., 85, Gracechurch-street, London, E.C.

ENDEAN AND CO., STOCK AND SHAREDEALERS,
BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 85, GRACECHURCH STREET, LONDON, E.C.
Telegraphs, Railways, Insurance, Banks, Canals, Hotels, Mines (home and abroad), Steam-ships, &c., together with every other description of Stocks, Bought or Sold for cash or fortnightly settlement.
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Letters and telegrams receive prompt attention.
Prospectuses of the Terras and Gelfron may be had on application as above.
ENDEAN AND CO., 85, Gracechurch-street, London, E.C.

SILK AND CO., STOCK AND SHARE BROKERS.
CHIEF OFFICE: 39, REGENT STREET, W.
CITY OFFICES: 36, MARK LANE, E.C.
We are prepared to negotiate the Purchase or Sale of Stocks and Shares in Consols, Foreign Bonds, Railways, Banks, Insurance, Gas, and other Companies. BUSINESS of every description in mining shares at net prices for cash only. CARDIGAN BAY CONSOLS—SOUTH CARDIGAN.—These shares should be at once secured.
FRANK LIMMER, Secretary.

MR. J. B. HAWKES, STOCK AND SHAREDEALER,
2, CROWN COURT, THREADNEEDLE STREET, E.C., has FOR SALE the following shares:—
10 Tan-yr-Allt, £24½. 20 W. Tankerville, £21 6s 9d. 2 So. Frances, £33½.
5 W. Mary Ann, £24½. 50 Wt. Drake Walls, 6s 9d. 50 Wt. Drake Walls, 6s 9d.
10 Wheal Buller, £26½. 30 Wheal Crebor, 14s. 9d. 20 Penrhy, 45s.
20 West Caradon, 16s 6d. 2 Wheal Seton, £123½. 1 West Seton, £123½.
5 Wt. Margaret, £8½. 10 Llanarmon. 5 St. John del Rey, £22.
20 West Maria, 51s. 9d. 1 Minera, £170. 50 Taquaril, 4s. 6d. pm.

MR. BRENCHELY, SHAREDEALER, 78, OLD BROAD STREET, LONDON, IS DEALING in all MARKETABLE SHARES for CASH.

NOTICE OF REMOVAL.
JOHN GEORGE PENNINGTON, SHAREDEALER, begs to state that he has REMOVED from 74, Old Broad-street, to 2, CROWN COURT, THREADNEEDLE STREET; Also, that he has no connection whatever with the circular issued bearing the names of LAVINGTON and PENNINGTON, 44, Threadneedle-street.

MESSRS. J. HUME AND CO., STOCK AND SHARE BROKERS,
74, OLD BROAD STREET, LONDON, E.C.
Railways, Banks, Foreign Bonds, Mining Shares, &c., bought and sold at closest prices.
EAST LOVELL.—Clients should consult Messrs. H. and Co. as to holding or not. Price, £30 to £32½.
Bankers: The London Joint-Stock Bank.

MESSRS. W. DUNN AND CO., STOCK AND SHARE-DEALERS, 3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.
Bankers and Reference: National Provincial Bank of England.

FOR SALE, at prices affixed:—
50 Aberdaunt, 27s. 5 East Bassett, £6. 20 So. Condurrow, £2 10s.
20 Bradford, £27 4s. 10 Great Retailack, £3. 10 South Darren, 30s.
5 Cardigan Bay Cons., 5 Gt. Wh. Vor, £10 18s 9d. 10 Sweetland Ck., £23 10s.
£5 10s. 50 Guerrero Gold, £1. 2 South Frances, £33.
40 Chontales, 20s. fully paid, 10s. 5 Tankerville, £16 10s.
5 Cook's Kitchen, £21. 100 Nanteco Consols, 14s. 2 Wt. Chiverton, £23 10s.
20 Drake Walls, 25s. 5 Pacific, £7. 10 W. Tankerville, £21 10s.
100 Excelsior, 3s. 9d. 50 Pen'Alit, £1 12s. 6d. 10 Wheal Agar, £2 17s 6d.

Our letters in reply to Mr. W. E. Elliott, of Tavistock, have been returned through the Dead-Letter Office, marked "Not known."
BARTLETT AND CHAPMAN, STOCK AND SHARE DEALERS,
36, CORNHILL, LONDON, E.C.
THE INVESTMENT CIRCULAR, published on the first Wednesday in each month. Subscription, 5s. a year, including postage; a single copy, 6d.
THE HANDY-BOOK FOR INVESTORS, comprising a sketch of the Rise, Progress, and Present Character of every species of Investment, British, Colonial, and Foreign; including an estimate of their comparative safety and profit. Bound in cloth, 10s. 6d.
BRITISH MINES AND MINING, comprising a comparison of Mining with other Investments; a description of the Mining Districts of the United Kingdom, and a detailed account of the Tin, Copper, Lead, and other Mines in Cornwall, Devon, Salop, Wales, and the Isle of Man; with a complete Glossary of Mining Terms. Bound in cloth, 2s. 6d.
Cheques to be crossed London and Westminster or Alliance Bank.

THE STAFFORDSHIRE BRICK AND TILE COMPANY (LIMITED).
BARTLETT AND CHAPMAN RECOMMEND the PURCHASE of the SHARES of PERMANENT INVESTMENT—TO RETURN at LEAST FIFTEEN PER CENT. on the first Wednesday in each month.
The works are in full operation, and a large business is being carried on. As the greater part of the shares are already applied for, and the LIST CLOSING on WEDNESDAY, the 20th instant, early application is necessary to secure an allotment.

MR. CHARLES THOMAS,
MINING AGENT, AND GENERAL SHAREDEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. JOHN GIBBS, STOCK AND SHAREDEALER,
51, THREADNEEDLE STREET, LONDON, E.C.
All kinds of shares bought and sold at closest market prices.
Bankers: London and County Bank.

MR. T. E. W. THOMAS, STOCK AND SHAREDEALER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Business operations in Mining Shares effected at close market rates.

MR. WILLIAM MICHELL, 42, CORNHILL, LONDON, E.C.
Dealer in British Mines, Stocks, Shares, &c.

MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,
70 AND 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Bankers: City Bank.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 AND 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

MR. H. WADDINGTON, 48, THREADNEEDLE STREET, LONDON.

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This edition is revised, with additional remarks, and brought up to the present date. Price 1s.
S. Austinfrilars, London, E.C.

Second edition, price 6d..
SELF HELP TO PATENT LAW;
Also, price 1s..
COLONIAL AND FOREIGN PATENT LAWS.
By GEORGE DAVIES, C.E.
Published at the Office for Patents, 4, St. Ann's-square, Manchester, by GEORGE DAVIES, C.E. (late John Davies and Son).
Established 1855.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at net prices in every description of security.
SPECIAL BUSINESS in Tankerville, West Tankerville, East Seton, North Pool, Frank Mills, Bwiche Consols, East Lovell, South Darren, Caldbeck Fells, West Chiverton, Spearan Moor, West Godelphin, and Wheal Agar.

Sixth Edition, now ready. Post-free, seven stamps.
HOW TO INVEST, AND WHAT TO SELECT.
A Guide to Large and Small Capitalists, containing full explanation of the Cost-Book System, and other statistical information.
E. J. BARTLETT, 30, Great St. Helen's, London.

MR. THOMAS THOMPSON, STOCK AND SHAREDEALER,
12, OLD JEWRY CHAMBERS, LONDON, E.C.
Mr. THOMPSON recommends the purchase of NEW CENTRAL SNAILBEACH shares, as this mine will become the most valuable property in the district; also of LLANDIDLOES WHEAL VAN.
Free on application a few remarks on "Mining in the Llandidloes (Van) district," also on "The Science of Investments."

MESSRS. G. LAVINGTON AND A. PENNINGTON,
44, THREADNEEDLE STREET, E.C., have SPECIAL BUSINESS in the undermentioned:—Pacific Gold, Sweetland Creek, Great Vor, East Lovell, and Tankerville.
An OFFER WANTED FOR:—200 Guerrero Gold, 10s. paid, and 250 ditto, 20s. paid. No reasonable bid for the above will be refused.

NOTICE OF REMOVAL.
MR. J. H. COCK begs to inform his FRIENDS and the PUBLIC that he has REMOVED from 74, Old Broad-street, to 2, CROWN COURT, TREADNEEDLE STREET (Ground Floor).
BUSINESS transacted in every description of stocks and shares, as usual, at close market prices.

MONEY.
INVESTORS DESIROUS OF HAVING STOCK CARRIED ON AT ARRANGED PRICES are SOLICITED to APPLY to Mr. J. BRENCHELY, 78, Old Broad-street, London.

FOR SALE,—ONE HUNDRED AND TWENTY BRYN ROYALTAN CONSOLS (LIMITED) SHARES, at 20s. per share (40s. fully paid).
Apply to "A. Z." 19, Norfolk-street, Strand, London, W.C.

MESSRS. LISCOMBE AND CO.,
39A, SOUTH CASTLE STREET, LIVERPOOL,
MINING SHARE BROKERS.
Have the BEST and LATEST INFORMATION on all the LEAD MINES of WALES and the NORTH OF ENGLAND, and on all AMERICAN MINES, and are in a position to transact business in most of them at closest market prices. Messrs. LISCOMBE and Co. issue monthly the "Liverpool Mining Circular," containing special information on all the leading Welsh Mines, which can be had on application.

MR. EDWARD GLEDHILL, MINING AGENT AND ENGINEER,
CLAREMONT HILL, SHREWSBURY.
Mines surveyed and reported upon. The management of mines conducted. The sale of mines, mining property, ores and minerals, &c., negotiated. Shares dealt in. Assays and analyses undertaken.

CORNWALL AND DEVON MINING AGENCY,
CALLINGTON, CORNWALL.
This AGENCY NEGOCIATES the PURCHASE and SALE of MINES and MINING SHARES, either entirely at the risk of their clients, or the Agency will share the responsibility with their clients on terms to be known on application. Mines personally inspected for clients at a fee of 21s. per annum. Attention is particularly requested to the mines of this district.
We are still purchasers of HOLMBUSH and KELLY BRAY shares. Sellers are requested to communicate lowest price at once.
We have business in PRINCE OF WALES, PRINCESS OF WALES, and QUEEN MINES, to which we beg to direct particular attention.
FOR SALE, on easy terms, an INTEREST in a first-class TIN MINE, and a TIN and COPPER MINE; also the ENTIRETY of a splendid SET in the vicinity of the Prince of Wales and Queen Mines.
C. FENGILLY, Secretary pro tem.

MESSRS. W. BRUNTON AND CO.,
SAFETY FUSE MANUFACTURERS,
REDRUTH, CORNWALL; AND BRYNEG, NEAR WREXHAM.

MR. EDWARD BREWIS, STOCK AND SHAREDEALER,
No. 34, OLD BROAD STREET, LONDON, E.C.
Business transacted for prompt cash, or if preferred for account, every description of tin, lead, copper, gold, and silver mining shares at the best prices. Money advanced on mining shares for account, or a longer period if desired. Telegrams promptly attended to.
Bankers: The Alliance Bank, London, E.C.



THE HOWARD SAFETY BOILER.

Made entirely of WROUGHT-IRON TUBES, and other improvements, adapting it for MARINE, STATIONARY, and PORTABLE ENGINES.

THESE BOILERS ARE NOW WORKING SUCCESSFULLY IN ALL PARTS OF THE WORLD. One Firm in the North of England, who had a 50-horse power Boiler in 1868, has since purchased over twenty others.

Patentees and Manufacturers: J. and F. HOWARD, Britannia Iron Works, Bedford.
LONDON OFFICE: 4, CHEAPSIDE (three doors from St. Paul's).

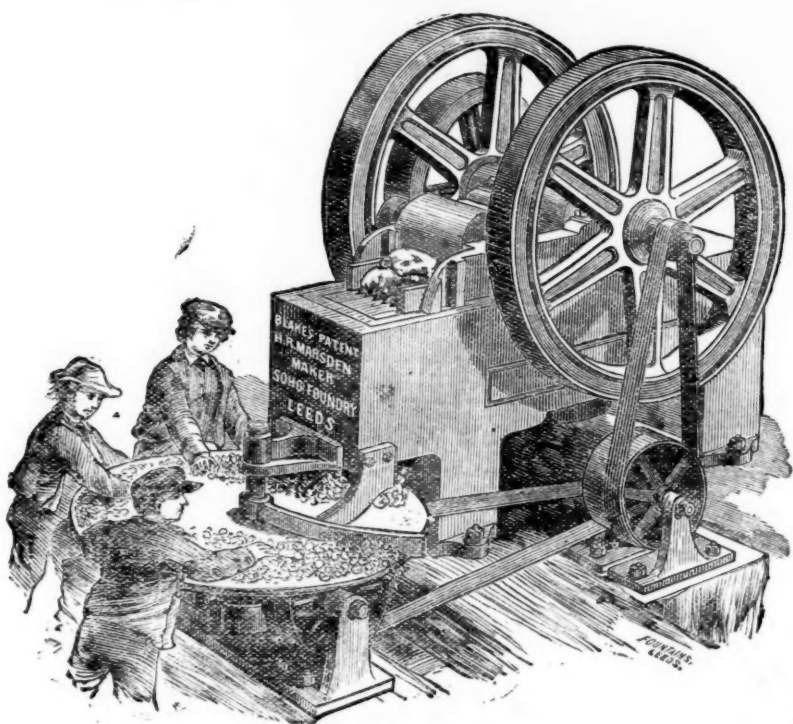
AWARDED TWENTY GOLD AND SILVER FIRST-CLASS PRIZE MEDALS.

IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MACADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER, OR ORE-CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

This is the only machine that has proved a success. This machine was shown in full operation at the Royal Agricultural Society's Show at Manchester, and at the Highland Agricultural Society's Show at Edinburgh, where it broke 1½ ton of the hardest trap or winstone in eight minutes, and was AWARDED TWO FIRST-CLASS SILVER MEDALS. It has also just received a SPECIAL GOLD MEDAL at Santiago, Chili. It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mining Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last 12 months, and Capt. Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

For the Parys Mining Company,
H. R. Marsden, Esq. JAMES WILLIAMS.

Eaton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaws about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.

THOS. GOLDSWORTHY & SONS.
H. R. Marsden, Esq.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent.

WILLIAM HUNT.
Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. Wm. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.

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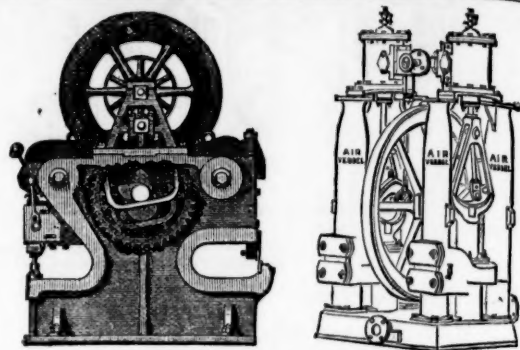
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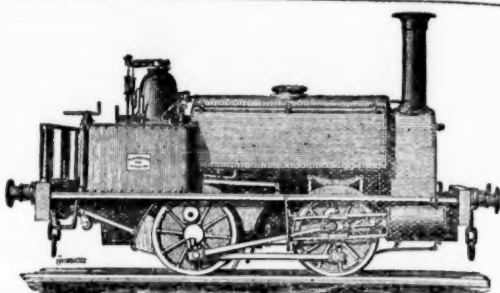
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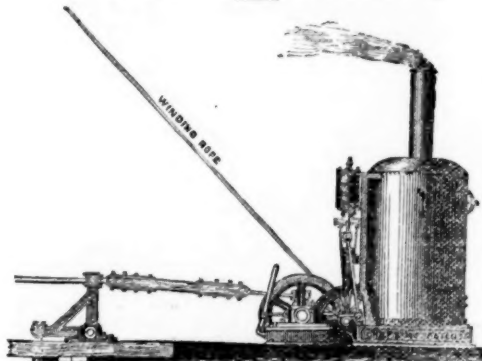
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Meetings of Mining Companies.

THE TANKERVILLE MINING COMPANY.

The first general meeting of shareholders was held at the mine, near Minsterley, on Tuesday. It may not be generally known that this property was originally worked by the well-known lead smelters, Messrs. Walker, Parker, and Co., and that subsequently, under the direction of the present able manager, steam-power was provided, the shaft deepened, and a series of cross-cuts put out to prove the hill ground south of the workings then in progress. Emboldened by the extraordinary results thus developed, the shaft was sunk to a still greater depth, which disclosed a lode of almost unexampled productiveness; for while in the 42 it did not yield more than from 2 to 3 tons per fathom, at the present depth—8 ft. below the 94—it is between 15 and 16 ft. in width, and is stated to have produced as much as 60 tons per fathom. The manager of the neighbouring mine (Snailbeach) has affirmed that during his experience there never has been so rich a lode at Snailbeach. The permanent character of the mine is still further materially guaranteed by the fact that there are many other important lodes, many of which will be commanded by the new shaft now in course of sinking. One of these—the south lode—is standing whole below the 62, its rich ore being parallel to the great bunch in the Tankerville lode; these two lodes are expected to form a junction in depth. Therefore, as the manager very properly observes, "it is extremely difficult to estimate the real value of a mine like this," the more especially when it is borne in mind that from the almost exceptional purity of its ore the cost of bringing it into a merchantable condition is probably less than that of any other lead mine.

For the information of those who may wish to visit the important mining district in which Tankerville now deservedly occupies such a prominent position, it may not be out of place to mention that it is situated about 14 miles from Shrewsbury. From north-east to south-west it extends for a distance of something like four miles, its breadth varying from one to two miles. The extreme opposite points are marked by the celebrated Snailbeach and the White Grit Mines. Although the district is comparatively limited in extent, the various lodes have proved, and are still proving, to be highly productive to a very considerable depth, as instanced in the Old Bog, Pennerley (Stiperstones), and Snailbeach. The lodes occur in the Llandilo group of the Lower Silurian period.

According to the testimony of Captain Waters, who has made this district his special study for many years, successful mining has been carried on for a very considerable period, almost exclusively by private enterprise, and, therefore, the wealth of the mines has been hid from public observation. Lead mining in this district dates back at least to the Roman period, a pig of lead stamped with the date of the reign of Adrian VIII. being still in the neighbourhood. It appears that more than a century since the whole of the mines now in active working were incorporated under one local company, which from various causes (not the least important being inadequate capital and inefficient machinery) proved unsuccessful.

Among the numerous really valuable mines thus abandoned by that company (locally known as "the Laurences") were Snailbeach, Tankerville, Old Bog, and Pennerley. Since that period Snailbeach has been sunk to a depth of about 200 fathoms; and in one of the deeper levels a course of ore has been driven through for a length exceeding 100 fathoms, the average yield being computed at not less than 10 tons of lead ore per cubic fathom. The present returns are about 250 tons per month. Old Bog also has been sunk nearly 200 fathoms; and it is said, in the locality, that the lodes yielded for many years upwards of 400 tons of lead ore per month. The Batholes and Roman Gravels Mines have likewise yielded enormous returns of lead and blende. Indeed, we have the authority of Captain Waters for stating that in no single instance has a mine in the district been fully developed that has not proved to be a rich prize to its shareholders.

Among those present at the meeting were—Messrs. W. Greame, Peter Watson, E. Geach, R. Wilson, S. York, W. Michell, P. Elwell, R. Braund, W. Martineau, T. R. Lewis, E. Cooke, F. Richardson, J. W. Dixon, H. C. Batchelor, S. Olding, H. Charlton, J. J. Pyne, J. H. Murchison, T. Bramwell, E. Collins, J. Eddy, and Captain A. Waters, &c.

The chair was occupied by Mr. GREAME, who stated that although the meeting was formal in its character, being held conformably with the provisions of the Companies Act, the directors, at the solicitation of many of the largest shareholders, had decided to hold it upon the mine, and the goodly number he saw present, more than half the proprietors being represented, was, he need hardly say, the best evidence that the step had been duly appreciated. (Hear, hear.) As far as he was concerned, he knew the mine and its great ore-producing capabilities, but upon the present occasion it would be much more satisfactory to hear from those shareholders who had just returned from underground their account of what they had seen. (Hear, hear.) Unlike most mines, the value of Tankerville could be judged by the most uninitiated, for the solidity and extent of the several deposits spoke for themselves, and knowing by results its commercial value, a tolerably correct computation could be made as to its intrinsic merits, but certainly the most sanguine among them could not have anticipated that such a mass of ore, unequalled as to richness by any mine in the United Kingdom, would have been opened out at the present bottom of the mine. (Hear, hear.) He would not, however, now detain the meeting by any lengthened remarks, but would call upon the manager of the mine, Capt. Arthur Waters, to submit his report.

Capt. ARTHUR WATERS, after a few introductory remarks, read his report as follows:—

July 11.—The day when the Tankerville Mining Company (Limited) was formed, and the date when active operations were commenced, must be fresh in the recollections of most of you. The conditions of sale stipulated that all ore sunk broken up to Feb. 28 last should be the property of the late proprietor; consequently, it was near the end of March before the old stuff was washed up, and returns became available for bringing to surface by the company. Before entering upon a detailed account of the progress made in the development of the mine during the present working, I would just remark that my original report on the property, giving, as it does, a description of the district in general, obviates the necessity of my now saying a word about the geology of the mines or collateral subjects. When the company took possession operations had to be commenced under numerous disadvantages. There was only one shaft which was sunk from surface to present bottom (the 74) to command the old lode, but which was in such poor condition, small width, and not available for the development of the great Tankerville lode, that until recently all the stuff broken in sinking, stoping, and driving levels on the latter, from the 74 to the 92, had to be drawn up to the bottom of the old shaft by manual labour, involving loss of time, comparatively small returns, as well as extra cost in the get of ore stuff. The machinery, too, was so inadequate that for the first two months little progress could be made, owing to the small quantity of stuff it was possible to bring to surface. An old-fashioned 16-in. cylinder high-pressure engine, to do all the winding, crushing, and pumping in a mine like this, need only be named to fully explain what the position was in regard to adequate motive-power. The way to grapple with difficulties being to overcome them, a new engine-shaft was started from surface to go down in direct communication with the great lode, and by which, from its central position, the other lodes can be worked simultaneously. The shaft is 12 fms. 2 ft., is well timbered, cased, and divided, with ladders and rollers fixed to bottom, the water and stuff being drawn by the engine. Now that the sinking goes on uninterruptedly we expect the shaft to be down to the next, and a communication with the cross-cut effected, in the course of the next four months. We have driven the cross-cut 12 fms. 8 ft. west of old shaft, and have 15 fms. 1 ft. 6 in. more to drive to the line of Watson's engine-shaft. We have also driven the 42, west of Owen's winze, 4 fms. 2 ft. 6 in., which is up to the perpendicular of the new shaft, and the men are sinking below that level, to communicate with the 52, which, when accomplished, will put us in a position to lay down all our lines, from which we can then make good the various sections from add to the 92 at one and the same time. By the time the work now immediately under consideration is completed we shall have sunk the shaft to and laid open rich sections of lode at the 104, 116, and 128 fms. levels, when, from what we already know of the mine, we shall be able to increase our return to (say) 300 to 400 tons of lead ore per month. We have already sunk the shaft 3 fms. 2 ft. below the 92, in a lode averaging 16 ft. wide, the yield of ore throughout being worth 80 tons of lead ore, or a money value of 980l., per fathom for every 6 ft. sunk, the shaft being 2 fms. long. The splendid course of ore in both ends of the pump must be seen to be realised. The back of the 92, directly over the shaft, also shows a great course of ore, worth fully 20 tons per cubic fathom, which is standing whole to the 82. This rich section of lode will have to be stoped forthwith, it being necessary to take the ground away to form the line of Watson's shaft from the 92 upwards. Brown's stop, in back of the said level, west of winze, is worth 3 tons of ore per cubic fathom, and goes on improving as we approach the run of the great deposit at and about the above-named shaft. From roof of Brown's stop (6 ft. above the 92) to the 74 there is a continuous rich course of ore. The stop in the 92, east of winze, is also yielding about 3 tons of ore per cubic fathom. Brown's shaft, which is completed for winding through with machine-kibble from the 74 to the bottom level, goes down in the centre of a rich run of ore, and which is now cut open to advantage for stoping. In connection with this shaft a large fork is made, into

which the bottom water is drained; drawn from thence by the small engine, instead of by manual labour, as hitherto. At the 74 shaft-tackle has been erected, landing-brace put up, rooky shoot, or pass, for the lead-stuff provided, together with new engine, boiler, and drawing-machine got into place, all of which go to make up a power much needed, and which will facilitate the future working of the mine, and thereby add in no small degree to the profits of the company. A considerable amount of work has been done also in trying to get rid of the smoke from the boiler above mentioned, by a system of pipes and traps doors from Tankerville lode into the workings on old lode, and thence out to surface by way of the Boat level. This mode seemed to meet the requirements of the case at first, but we found that when a change in the temperature or in the direction of the wind occurred at surface a corresponding change in the draught from the boiler was produced, causing the working of the engine to be a matter of difficulty and uncertainty. To overcome this, we have carried up a most complete wrought-iron chimney from the 74 to surface, the entire length of pipes being 170 fms. In a few days the engine will be in full swing, some 24 men, who have hitherto been constantly employed in winding ore stuff and water from all the workings below the 74, will be relieved of that duty, and be added to the number of miners daily engaged in the direct get of lead ore. There being no further need of using the winzes as outlets for the stuff, the rich sections of ore ground east and west of those points can be stoped at will. And what is most important, this new ground will be worked and our returns materially increased without adding to our present monthly labour cost. No trials of importance, or discoveries worthy of remark, have been made in the upper levels on either the old lode, Roberts' lode, or south lode, since you have been in possession. Now we have so greatly improved our position for the dispatch of stuff, trials will be made, and productive points laid open on all the veins enumerated. The new 25-horse power steam-engine put up at surface for winding out of all the shafts a splendid machine, and is equal to our present needs. We hope to complete the erection of house around and over the said engine in two days from this date. Men are employed taking out foundations for large engine and crusher house to be built in connection with Watson's engine-shaft. We are also preparing work for new dressing-floors, including machine, jigging-sieves, and round buddles, and hope to be able to dress large returns at a small cost per ton of ore. The ore being found in solid masses, and associated with a very light matrix, there will be no need for large or expensive dressing machinery. In conclusion, let me inform you that the mine never looked better than it does to-day—that Watson's shaft, below the 92, continues to go down in a course of ore that widens and becomes richer as we sink day by day, that instead of reducing we go on adding to our reserves, and have every prospect of further doing so for many years to come. The returns for the past four months amount to 450 tons of lead ore, and we calculate our produce for the next four months will be 700 tons, the labour cost (less royalty) being about the same as in the preceding period.—ARTHUR WATERS.

The CHAIRMAN then invited those shareholders who had been underground to state to the meeting the result of their personal inspection of the property; and perhaps Mr. William Michell, who had had considerable practical experience in lead mines, would open the discussion.

Mr. WILLIAM MICHELL said his report of to-day's inspection could be condensed in a very few words—that since his last inspection the mine had improved in actual value at least 50 per cent. (Hear, hear.) He made that statement as a practical man, and challenged contradiction. The shares, although now selling at 17l., were better worth 20l., or 22l. than when they were readily negotiable at that quotation. The difficulty under which the mine had been worked was all but surmounted, but it would take them at least seven years to develop such a mine; and during that period there would be a gradual increase upon the present returns, yielding a very handsome interest upon shares at far above their present price. That result would be realised from the one lode only now being developed, but there were many other lodes to be explored. From this one lode, which had proved to value every foot it was sunk upon, the present returns were very little as compared with what they would be presently. Practically could better understand its value when he stated that six men would stop more than twenty-four would sink. His unshaken belief was that during the next seven years Tankerville would surpass any mine in the United Kingdom. (Hear, hear.)

Mr. EDWARD COOKE said it afforded him very great pleasure upon this, his sixth inspection of the mine, to have been accompanied by several shareholders. Those who had availed themselves of the present opportunity to inspect the mine could judge themselves of the capabilities of the property in which they have embarked their capital. (Hear, hear.) No one with even ordinary perceptive faculties could fail to be struck with the enormous richness of Tankerville, for it was, in truth, a grand mine, and he could find no other words to express his own opinion of it. He stated that in the presence of a practical man who had had long and varied experience in mines, and who had probably seen lodes in lead mines of great value. But he ventured to say, however, that he never in the whole course of his experience saw such a valuable lode as he had just seen at the bottom of Watson's shaft. (Hear, hear.) He had told them that the mine had improved fully 50 per cent. in value since he last inspected it. He (Mr. Cooke) was pleased that so many shareholders had availed themselves of the opportunity of going underground, although the time did not allow them to see all the ore and the ore level in the upper levels. He was asked some times, why are the shares so dull? At he could only say that the price of the shares was no criterion whatever of the value of the mine. For his own part, he was utterly indifferent about it. He looked more to the returns of ore and the future prospects, feeling confident that shareholders would be in the receipt of good dividends for many years to come. (Hear, hear.) At present the mine may be said to be just in its infancy, and yet in not more than four months from the formation of the company the directors would probably announce the first actual profits of the mine. He was asked how much lead. He would say to anyone—"Send and have the mine inspected if you have any misgivings as to the accuracy of the extraordinary accounts given of this valuable property." (Hear, hear.) Holding a large interest in it, it may be said that he allowed that to warp his judgment, but it was that fact that induced him to enter so minutely into the various details; and it was a great satisfaction to him to find that the favourable opinion he had formed, and so often expressed, was shared in and more than endorsed by practical men well acquainted with the Tankerville Mine. (Hear, hear.) It was not too much to say that there was no known lead lode in the whole world equal in value to that now being opened out at Tankerville. (Hear, hear.) Capt. Arthur Waters believed that the best of it would not be reached till the shaft had been sunk 200 fms. deeper; and he based his opinion not only upon the character of the lode itself, but also from what had been realised in the district—for example, at Snailbeach, Old Bog, and Pennerley. Therefore, Tankerville would prove not only an unusually productive, but also an unusually lasting mine. (Hear, hear.) The lode had improved from level to level, and as yet it had been proved for about 30 fathoms in length, and who could tell that it would not be proved of equal value for 60 fms. long? Already they had a mine good enough for their lifetime? He remembered that Mr. Michell, after his first visit to the mine, computed the reserves as being worth 100,000l., and if since then the mine had improved in value 50 per cent. the aggregate money value of the reserves already opened out was at least equal to the price at which the shares are quoted. There were many thousands of fathoms of ore ground yet to be opened on above the 74 fm. level, and many lodes to be explored, which were known to be very rich. Those lodes would be developed when the new shaft had been sunk, and those who elected to retain their interest until the work was accomplished would be handsomely rewarded for their patience. (Hear, hear.)

Mr. EDDY (of Snailbeach), who had just inspected the mine, stated that the various points of operation were certainly rather under than overated by Capt. Waters. (Hear, hear.) The value of the mine a month since—when he last inspected it—and its present value was but very inadequately expressed by the fact that it had improved 50 per cent. He believed that when the little underground engine was fairly at work they would be able at once to raise the returns to 250 or 300 tons per month. (Hear, hear.) He did not see how they could get less, for there was the lead ground to produce it, while its dressing could be done with the greatest ease.

Mr. LEWIS thought those shareholders who had been underground were much indebted to those practical gentlemen who had accompanied them, for they had thus derived much valuable information. He expressed himself much pleased with the result of his visit.

Mr. OLDFIELD said the straightforward openness and candour evinced by the directors and the manager, by inviting shareholders to visit the mine—to say nothing of the self-evident value of the mine itself—could not fail to strengthen the confidence of the shareholders in the Tankerville Mining Company. (Hear, hear.) What he had just seen underground was something wonderful, and although he was not a practical man he could see that already a sufficient amount of wealth had been discovered to ensure the prosperity of the company for many years to come. He personally tendered the directors his thanks for having invited him to inspect his property, and all he could say was that he had been more than pleased with his visit. He much admired the most manly and politic course thus taken by the directors, and he could only hope that their commendable example was the rule instead of the exception. (Hear, hear.)

Mr. SMITH (of Manchester), having been underground, confirmed the previous speaker as to the truly wonderful character of the mine, as well as to the expediency of the course adopted by the directors in inviting the shareholders to visit the mine.

Mr. YORK said the actual value of the mine was so clear that he need only endorse what had been already said. His opinion was best shown by the fact that after he inspected the mine, some time since, he acquired a tolerably substantial interest in the company. (Hear, hear.) It afforded him pleasure to bear testimony to the unvarying under-estimates put forward by Capt. Waters as to the actual value of the mine, and it must be satisfactory to the shareholders to find that Mr. Eddy (of Snailbeach) had just stated that Captain Waters' report was very much under-stated. (Hear, hear.) It was impossible to have a more straightforward or worthy man than Capt. Waters, or one better qualified to develop the enormous resources of their marvellously rich property. (Hear, hear.)

Mr. COLLINS had closely followed up the reports which had appeared in the Mining Journal since the Tankerville Mine became the property of the company, and certainly all that Captain Waters had stated had been most abundantly verified.

Mr. PETER WATSON, as a director, was exceedingly gratified to meet so many shareholders present at this the first general meeting of the Tankerville Mining Company. Some from Manchester, others from Liverpool, Wolverhampton, and London, and that all had testified to the great—the truly great—value of their property. (Hear, hear.) There was no other such mine as Tankerville—there was no other lode so rich, either in this or any known country. (Hear, hear.) He believed that there was as great a future for this as any lead mine in the United Kingdom, whether as regards the returns or profits, and if such were not his opinion he certainly should not hold his present large interest in the company. Captain Waters had not told them that the money value of the lode in the shaft was 980l. per fathom, and that 980l. worth of lead was obtainable at an outlay of only 26l., and that the lode in the shaft was alone capable of yielding 100 tons of lead per month. (Hear, hear.) He did not think that sufficient importance was attached to the other celebrated

lodes which traversed their extensive mine, and had proved highly productive to the lowest point wrought; nor did it appear to be generally known that the sett comprised within its limits another mine, altogether independent of Tankerville proper—that was in reserve as a nest-egg for the future benefit of the shareholders. (Hear, hear.) So that the shareholders possessed an auxiliary interest irrespective of the present Tankerville Mine. He did not wish to depreciate the property of anyone, but seeing that the lode in Tankerville had been proved for such a length and depth to be of such exceptional richness, and was opening out even still more productive, he felt no one would charge him with being over-sanguine when he stated that Tankerville would surpass—and that at no distant date—the most productive mine in Wales. (Hear, hear.)

Mr. DIXON was exceedingly pleased to be connected with such a mine, and he was equally pleased with the efficiency and candour of their able manager, Capt. Waters. (Hear, hear.) The directors too, were fully entitled to the best thanks of the shareholders for the satisfactory way in which they had conducted the affairs of the company. (Hear, hear.)—Mr. PYNE believed that those who retained their shares would realise very handsome dividends.

Mr. DANIEL (the engineer), in reply to a question, stated that jiggling by machinery, as at the Van Mine, was not only much more inexpensive than hand-jiggling, but the cost was so comparatively trifling that it often paid well to re-work the waste.—The CHAIRMAN had omitted to mention that the directors thought they would be in a position at their next meeting to declare a dividend, as in addition to the amount standing to the credit of capital, they had in hand nearly 3000l., the proceeds of ore sold.

Mr. GEACH testified to the increasing value of the mine, and expressed his opinion that those who held the shares the longest, the more satisfactory would it be to them, both as to the actual value of the property, and the increased dividends that would be realised. (Hear, hear.)

Mr. E. COOKE said the directors could have no possible object in retaining the profit realised by the sale of ore, seeing that there was ample capital in hand to meet all possible contingencies.

Mr. YORK said that after the elaborate report submitted by Capt. Waters, and the exhaustive discussion which had taken place, the meeting could not possibly separate without according to Captain Waters the best thanks of the shareholders for the satisfactory manner in which he had conducted the various important practical details in the development of the mine. (Hear, hear.) He then moved a proposition to that effect.

Mr. DIXON had much pleasure in seconding the motion. No one could be with Capt. Waters long without being struck with his energy and industry. It was evident that he devoted his whole soul to his work. (Hear, hear.)

Mr. MURCHISON said that he had much pleasure in bearing his testimony to the manner in which Capt. Waters had managed the mine since the present company had possession of it, and further to the fact that the representations which Capt. Waters made to him when he introduced the mine to him (Mr. Murchison) had been fully realised. This was rather unusual in connection with such properties. He could not say that a dividend was looming in the distance, for it might be said that it was already at hand, and no doubt would actually be so in three or four weeks. The mine appeared to be improving in depth, and from present appearances Tankerville was likely to be one of the richest, if not the richest, mine in the country. There was nothing so convincing as seeing for one's self, and his advice to the shareholders generally was to visit the mine and examine it as minutely as possible. He could only say that it was highly pleasing and satisfactory to him to have introduced this mine to his friends on its first being brought to his notice by Capt. Waters. (Hear, hear.)

The proposition was then put and carried unanimously.

Capt. WATERS, having appropriately acknowledged the vote, stated that the future of Tankerville was big with success. (Hear, hear.) Certainly no one could but be satisfied that in Tankerville they had a great and lasting mine. He had known it for years, and he felt it was going on improving from day to day. It was situated in the right geological country—the rocks were acknowledged to be the most prolific of ore. The Snailbeach was one of the oldest mines in the kingdom, and had been one of the most productive. Old Bog, in the same district, had yielded immense quantities of ore, and the Pennerley Mines (now belonging to the Stiperstone Company) had also yielded enormously. The Roman Gravels and other mines had also proved immensely rich. There could be no doubt that Tankerville was only just beginning to show what it could do. He believed the day was not far distant when Tankerville, if not the best lead mine, would certainly be next to the best lead mine in the kingdom. (Hear, hear.) He could assure the shareholders that all the strength of his body and mind should be brought to bear to produce the most satisfactory results. They had made a fair beginning, and they would go on increasing two, three, and even fourfold within the next two years. (Hear, hear.)

A vote of thanks was passed to the Chairman and directors, when the meeting separated.

WEST TANKERVILLE MINING COMPANY.

The first general meeting of shareholders was held on the mine, near Minsterley, on Wednesday, at which Mr. GREAME (the Chairman of the company) presided.

It may be mentioned that this company was formed about four months since, and that the property acquired is an extensive one, being 500 fms. from north to south, and about half a mile from east to west. Embraced within this area there are thirteen known north and south lodes, including some of the most productive of the Shropshire district. West Tankerville, like the Tankerville and Snailbeach Mines, was worked many years since by the Laurences, who expended nearly 500,000l. throughout the district, the greater portion of which was supplied by returns from lodes within the limits of the West Tankerville sett. The Wood vein, upon which a shaft is now being sunk, yielded 300,000l. worth of ore, pig lead at the time selling at not more than 8l. per ton. From surface to the 18 fathom level 300 tons of ore quarterly were drawn from the Wood shaft by horse-whim for a series of years. Through mismanagement and misrule generally the Laurences came to grief, and abandoned the whole of their mines in succession; but the Roman Gravels is again in operation, and yielding large profits. This latter mine adjoins West Tankerville. In addition to the 13 lodes above referred to, the Snailbeach lode traverses the sett for about half a mile in the eastern boundary, and the direction of the Snailbeach lode being nearly east and west it must form a junction with the West Tankerville and California lodes in the greenstone, and therefore can be explored under the most favourable conditions.

The CHAIRMAN said, that like the meeting of the Tankerville company, which was held yesterday, this was merely formal in its character, being held pursuant to the provisions of the Act of Parliament under which the company was incorporated. As in Tankerville, too, the directors of this company thought the shareholders should be afforded an opportunity of visiting their property, by which they would be enabled the better to form some idea as to the value and extent of their property. The West Tankerville Mine possessed a series of important mineral veins, not the least of which was the Wood vein, which although developed to only a very limited depth, had in former days yielded an enormous amount of wealth. The shaft was being sunk with the view of developing that vein in depth, where they felt assured most profitable results would be realised. An important discovery had already been made upon California lode, worth 3 tons per fathom, and favourable prospects were presented at the new shaft on the south boundary lode, where in the adjoining mine in several levels it was known to have been left worth 3 to 4 tons per fathom—the shaft was going down very speedily, and at a small cost. As to the Wood vein, Capt. Waters would explain in his report what that had yielded, although developed to a depth of only 18 fms. It was proposed to drive the ground under the 18, where the Laurences were believed to have left a good run of ore. He would not, however, further detain the meeting, but would call upon Capt. Waters to read his report.

Capt. WATERS then read his report, as follows:—

July 11.—The West Tankerville sett is one of the largest in the district. All the principal workings on the south boundary, the north boundary, the California, the Wood, the Batholes, and the Hope Valley lodes can be approached from and entered through shafts immediately adjoining the high road. The lodes referred to traverse the country in groups recognised by the names given above. No mine in Shropshire occupies a better position, geologically or locally, than yours, and I believe it would be truthful to say that no mine in the district has yielded larger quantities of lead ore, calculating from surface to the 18, at West Tankerville engine-shaft. This brief reference to the company's position at starting four months ago may be of interest to those who have not read my original report to the shareholders. That fair progress has been made towards the great work of bringing this extensive and splendid property into miner-like trim, and the numerous groups of unexplored productive lodes to yield forth their mineral resources, you will on assembling at the mines on Wednesday next have hard facts to show. The West Tankerville engine-shaft, which was in poor condition, and nearly full of debris from add to surface, is now in thorough order to receive the pitwork and whim-kibble, having good ladder-ways from top down to the water-line. The pumping-engine is also put into first-rate condition, having new cylinder bottom, new spring piston, requiring only the putting up of new boiler (over 11 tons) to enable us to complete the shaft. All materials, including boiler, being on the ground no time will be lost in getting the engine to pump. We have also cleared up shafts and properly secured the add, and let down the water for a distance of nearly half a mile, consequently all the preliminary work in connection with the drainage of the mines through the deep add is accomplished. The California new engine-shaft is sunk from surface 13 fms., and is now nearly on a line with the upper add, to which it is expected to communicate the shaft in a day or two. The shaft in question is intended to command all the California lodes, and there are several lodes referred to traverse the country in groups recognised by the names given above. will immediately go down on the course of a lode recently discovered in the upper add, worth quite 3 tons of rich lead ore per cubic fathom. We shall not have to pump until we enter upon the sinking below the deep add, therefore we may expect to sink California shaft from the present bottom to that point (a distance of 20 fathoms) speedily, and in rich ore ground throughout; the price for sinking the shaft, including securing the same, is 8l. per fathom. Men are employed driving cross-cut from upper add eastward to the shaft in question. We are also opening and securing mouth of the add, and putting the

quartz, and lead ore, yielding 3 tons per fathom. The 75, east of San Diego,

Established 1807.

work for lead ore. The slope below the 30 is not so good as it was, now worth 8 cwt. per fathom. Nothing is being done in the slope below the 30, between Nos. 1 and 2 winzes, as this place is full of stuff, and as soon as it is cleared out intend fixing a new stull from the back of the slope to the 30. It is of great value change worthy of notice since the 30 was put in. The connections for the stonework are all in place. If they do away with all our manual labour in spalling the rocks it will crush. It will do away with all our manual labour in spalling, and although the cost of the machine is high at the commencement, it will be cheap in the end, as it is capable of breaking 10 tons of stuff in the hour.

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JOURNAL. They are fully paid, and there is ample capital in hand to erect all the machinery, and to properly develop the various valuable lodes contained in the sett.

TANKERVILLE.—The details of the first general meeting are reported in another column. It will be seen that the mine continues to progress in a most satisfactory manner, that the reserves are rapidly increasing, and that the monthly returns of ore will henceforth be gradually increased. The permanent character of the mine may be judged by the evidence brought forward at the meeting, the manager stating that from the one lode now being opened out the returns can be quadrupled. There are several other productive lodes, which will be developed by the new shaft that is being rapidly sunk.

PACIFIC.—These shares have been more adversely affected by the panic than those of any foreign mine, from the fact that in the first instance, the shares were largely held by members of the Stock Exchange. It should be remembered that the 3/4 per share will be returned in a few days, and that there will then remain in hand a working capital of nearly 2/4 per share, the total number of shares being 15,000. This leaves an aggregate of 30,000/4, as the present market value of the silver mine at Lander Hill and the gold quartz mine in Grass Valley. Most satisfactory advices have been received during the week from Lander Hill, and the indications are most encouraging for cutting other lodes from the cross-cut at the 515 ft. level—lodes which both east and west have been and still are highly productive. The driving at the 400 ft. level end west is laying open a good mine. At Union Hill Mine crushing operations have been suspended until the necessary repairs to the machinery are completed. This mine is stated to be of equal promise to the Eureka Mine, which is in the immediate vicinity. The lode is of the same size, and presents every indication of proving equally productive in depth. The change in the management effected by one of the directors, who is now at the mine, is likely to bring about most satisfactory results.

THE MORRIS TESTIMONIAL.—In accordance with the notice in last week's *Mining Journal* the Testimonial to Professor John Morris, of University College, London, was presented by Sir Roderick Murchison, K.C.B., at the Geological Society's Rooms, on Thursday, and consisted of a mounted vellum, a certificate for 500/4 Great Indian Peninsula Guaranteed Stock, and cash, the total amount subscribed being about 620/4, from which the cost of the vellum (less than 5/4) was the sole deduction. Of the cash balance, 30/4 was presented on Thursday, the remainder being left with the treasurer, Mr. Milnes, at the disposal of Prof. Morris. Details will be given next week.

INJURIOUS ACTION OF LEAD PIPES ON WATER.—The importance of discovering a really efficient means of preventing the injurious action of lead pipes on water is universally acknowledged, and the experiments of Dr. Grace-Calvert have proved beyond question that no proposition hitherto brought forward has been calculated to remedy the evil complained of. A discovery, however, has now been made through which the water supplied by leaden pipes may be obtained by the consumer as pure as from the original source. Dr. H. SCHWARTZ, of Breslau, has discovered a means by which the portion of the lead forming the interior surface of the pipe may be converted into an insoluble sulphide, the natural consequence being that the water passing through will be as free from contamination as if glass were used. The means by which Dr. Schwartz effects this conversion are extremely simple. He merely passes a strong solution of the sulphide of an alkali through the pipe to be acted upon, and the process is completed. This solution, which is either a sulphide of potassium or of sodium, is used at a temperature of about 212° Fahr., and is allowed to act upon the metal for from 10 to 15 minutes. It is stated that in practice a boiling solution of caustic soda and sulphur is found to answer every purpose (*Mining Journal*, Sept. 19, 1863). This, says the Boston (U.S.) *Journal of Chemistry*, writing in 1870, "may be a new thing in Breslau, but more than two years ago we suggested a similar process as, on the whole, the best that we knew for the purpose. The directions we gave were as follows:—Dissolve one pound of sulphide of potassium in two gallons of water, and let it remain in the pipe twelve hours, or until the inside is thoroughly blackened. The same recipe was given in Rolfe and Gillet's 'Handbook of Chemistry,' published in 1868. The use of a warm saturated solution, as Dr. Schwartz directs, would do the work in shorter time, which might be more convenient in some cases."

POISONING BY BLAST-FURNACE GASES.—Dr. PERCY, of the Royal School of Mines, Jermyn-street, writing to the *Times*, says:—"It is reported that four men have been killed at iron works in North Staffordshire by what is termed 'waste gas' from the blast-furnaces. The poisonous ingredient of that gas is carbonic oxide, and the inhalation of it in very small quantity, whether pure or mixed with common air, rapidly destroys life. I have collected and published several cases of fatal poisoning from that cause at iron works, foreign as well as British. A few years ago the engineer of the Dowlais Iron Works was suffocated in his office by the escape of this gas from an adjoining culvert. It is important that the managers of such works should be acquainted with its highly poisonous nature, and take every precaution to prevent their workmen from being exposed to its influence. As the use of the waste gas from our blast-furnaces for heating steam-boilers, mine kilns, &c., is extending daily, it is to be feared that deaths from its inhalation may become more frequent than hitherto, unless those who deal with it are fully instructed concerning its action on man. With the hope of communicating such instruction as widely and as quickly as possible, I beg to submit this letter for your consideration."

RUSTING OF IRON.—Dr. CALVERT communicated to the Chemical Society some very useful information on the rusting of iron. Rust is mainly sesquioxide of iron, and it has always been supposed that the active agents in producing it are moisture and oxygen. It seems, however, from Dr. Calvert's experiments, that carbonic acid must be associated with these to produce any considerable amount of oxidation. In dry oxygen iron does not rust at all, in moist oxygen but little and seldom, but in a mixture of moist carbonic acid and oxygen iron and steel rust very rapidly. In like manner a piece of bright iron placed in water saturated with oxygen rusts very little, but if carbonic is present as well oxidation goes on so fast that a dark precipitate is produced in a very short time. Curiously enough, bright iron placed in a solution of caustic or carbonated alkali does not rust at all. These facts show that the points to be attended to in the preservation of iron from rust are the exclusion of carbonic acid and moisture, two indications which may be very easily fulfilled.

EXPORTS OF RAILWAY IRON.—The exports of railway iron from the United Kingdom attained in May the imposing total of 131,208 tons, as compared with 87,392 tons in May, 1869, and 54,838 tons in May, 1868. Russia took no less than 52,741 tons of our railway iron in May, against 23,120 tons in May, 1869, and 10,011 tons in May, 1868. To the United States we sent in May 33,175 tons of railway iron, against 25,557 tons in May, 1869, and 24,221 tons in May, 1868. In the five months ending May 31 this year the exports attained an aggregate of 437,235 tons, against 320,745 tons in the corresponding period of 1869, and 233,769 tons in the corresponding period of 1868. The exports have increased this year largely to Russia, and slightly to the United States. They have also increased this year to Prussia, Holland, Spain, the Danubian Principalities, Cuba, Brazil, Chili, British India, &c.; but they have decreased to Sweden, France, Egypt, Peru, British America, and Australia. The value of the railway iron exported in May was 1,050,154/4, against 697,022/4 in May, 1869, and 433,246/4 in May, 1868; and for the five months ending May 31 this year 3,521,561/4, against 2,480,594/4 in the corresponding period of 1869, and 1,809,030/4 in the corresponding period of 1868.

INVESTMENTS IN LEAD MINES.—The DIVIDENDS paid by LEAD MINES for the year have DOUBLED IN AMOUNT in the last ten years, and are likely to continue to increase. Some of the young lead mines will probably become profitable, and rise greatly in value in a short time. Full particulars, with a MAP of the Cardiganshire and Montgomeryshire districts (including Van, Dyffide, Pynllimmon, East Darren, South Darren, Lisburne, Cwystwith, Cefn Brynno, and other mines), can be obtained price 1s. on application to J. H. MURCHISON, Esq., No. 8, Austin Friars, London, E.C.

With this week's *Journal* a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Ferry Hill Iron Works; Government Inspectors' Reports; Lead Mining in Devonshire; New Mines in Old Districts, in Derbyshire and North Wales; Variation of the Magnetic Meridian (W. Lintern); Charcoal Pig-Iron Railway Axles; Sir J. Whitworth on Railway Axles; Steam-Boiler Inspection Committee (J. Swift); Mining, Legitimate and Speculative (A. Bennett); Van Mine, and its Prospects (J. Roberts); Agents' Salaries (J. Roberts); Virtuous Lady and Queen Mines (T. J. Barnard); Terras Tin Mine, and its Management—Foreign Mining and Metallurgy—Australian Mine Reports—Foreign Mines Reports—Grylls's Annual Mining Sheet—Patent Matters (Michael Henry), &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JULY 15, 1870.

COPPER.		IRON.	
Best selected, p. ton	75 0 0	Bars Welsh, in London	7 6 7 10 0
Tough cake and tie	73 0 0	Ditto, to arrive	7 5 6 7 10 0
Sheeting & sheets	76 0 0	Nail rods	7 10 0 0
Boils	77 0 0	Staf. in London	8 5 0 0 0
Bottoms	78 0 0	Bars, ditto	8 0 0 0 0
Old	69 0 0	Hoops, ditto	8 15 0 0 0
Burra	74 0 0	Bars, at works	7 15 0 0 0
Wire	0 0 10	Hoops, ditto	8 2 6 8 0 0
Tubes	0 0 11	Sheet, single	9 10 0 11 0 0
BRASS.		Pig No. 1, in Wales	3 15 4 5 0 0
Sheets	per lb. 8 1/4 d.	Refined metal, ditto	4 0 0 0 0
Wire	" 7 1/4 d.	Bars, common ditto	6 15 0 0 0
Tubes	" 10 d. 11 1/4 d.	Do. mch. Tyneor Tees	6 10 0 0 0
Yellow Metal Sheath. p. lb.	6 1/4 d. 7 d.	Do., railway, in Wales	7 10 0 0 0
Sheets	" 6 1/4 d.	Do., Swed. in London	9 10 0 0 0
SPELTER.		To arrive	9 12 6 0 0
Foreign on the spot	£10 0 0-19 10 0	Pig No. 1, in Clyde	3 0 0 3 8 0
" to arrive	Nominal.	Do. mch. Tyneor Tees	2 9 0 0 0
ZINC.		Do. Nos. 3, 4, & Co. do.	2 6 2 7 0 0
In sheets	£23 10 0	Railway chairs	5 17 0 0 0
QUICKSILVER (p. bottle)	7 17 0	" spikes	0 12 0 0 0
TIN.		Indian Charcoal Pigs,	
English blocks	Nom. 134 0 0	in London, p. ton	6 5 0 6 10 0
Do., bars (in brls.)	" 135 0 0	STEEL.	
Do., refined	" 137 0 0	Swed., in kegs (rolled)	13 10 0-13 15 0
Do., cast	" 138 0 0	(hammered)	14 5 0-14 10 0
Do., Straits	128 0 0-130 0 0	Ditto, in faggots	15 10 0 0
TIN-PLATES.		English, spring	17 10 0-23 0 0
IC Charcoal, 1st qua.	1 6 6-1 8 0	LEAD.	
IX Ditto, 2d qua.	1 2 6-1 13 6	English Pig, com.	18 5 0-18 10 0
IX Ditto, 3d qua.	1 2 6-1 13 6	Ditto, L.B.	18 10 0-18 10 0
IX Ditto, 4th qua.	1 2 6-1 13 6	Ditto, W.B.	19 0 0-19 0 0
IX Coke	1 3 0-1 3 6	Ditto, sheet	19 0 0-19 0 0
IX Ditto	1 3 0-1 3 6	Ditto, red lead	20 0 0-20 10 0
IX Canals, p. ton	13 10 0-14 10 0	Ditto, white	27 0 0-30 0 0
Ditto, at works	13 0 0-14 0 0	Ditto, patent shot	21 0 0 0
		Spanish	18 0 0 0

REMARKS.—The question of peace or war has engaged the attention of the commercial community this week more than any other subject, and renewed fears from day to day have been excited lest negotiations should terminate in actual hostilities. The announcement of the withdrawal of Prince Leopold afforded great relief, and instantly strengthened the prospects of peace. It released Spain from any further participation in the affair, and was the only avowed object France had in view in addressing Prussia. All pretext for war was, therefore, apparently removed, and it seemed a pity France had not made her request in more courteous terms, and in a manner calculated to establish a good understanding. Prussia, however, knew very well that any secret correspondence upon such an important matter would excite the jealousy of France, and ought to have been more than ordinarily careful in providing against such a possibility; but she may have calculated the cost, and prepared to meet the consequences, if so, she is very much to blame, and France may be perfectly justified in still demanding guarantees for the future. Whatever the result may be, one thing is now clear, that a very bad feeling exists between two powerful continental nations, and this is a most unsatisfactory state of things for trade, as it must necessarily cause uneasiness and distrust. Our markets are being kept in a state of suspense, and very little business transacted. Prices are all nominal.

COPPER.—3600 tons charters for the fortnight were reported on Monday from Valparaiso, June 3, per Reuter, and created such a consternation amongst the holders of Chili bars, that they were loud in their expressions of disbelief, and said it must be a mistake in the figures, or must mean charters for a month; but the private advices, received the following morning, caused great vexation, and confirmed the fact that it was quite true the large quantity were charters for the fortnight only, and out of it about 2000 tons of regulus. The immediate effect which this announcement produced was a decline of 3d. per unit on regulus, and also a reduction in bars, business being reported at 67/4 10s. Our repeated warnings not to place too much reliance on the recent rise in prices must be so fresh in the minds of our readers that no further allusion need be made than to point to the present charters as confirmation, in great part, of our previously expressed views. It is seldom that errors in judgment are made when founded upon impartial and truthful statements; and although prices may be forced up for a time by speculation, combination, or otherwise, yet the market will sooner or later find its level. Much stress has been laid upon the falling off of charters, compared with last year, but very little mention is made of the comparative stocks which, if taken into account, pretty well balance the one against the other, so that as regards supplies there is no perceptible relief. Now, a word with regard to the influence that war is likely to have upon prices. France is one of the largest consumers in the world of Chili bars, and the question is, whether she would take as much as usual; and, again, will sellers have sufficient confidence to take French drafts in payment? The risk for so small a commission as 1/4 or 1/2 per cent. is a great one at the best of times, but in time of war cash terms would, no doubt, be insisted upon, and this in itself would limit the demand, and it might be so greatly diminished as to throw large quantities of Chili bars on to our market. The same will apply to Germany as regards Australian descriptions.

IRON.—The only variations that have occurred in our market are in Scotch pigs, which have fluctuated according to the nature of the intelligence from the Continent, but assume a declining tendency in the face of the latest telegrams from France. There is a decrease in the shipments this week of about 3000 tons.

LEAD.—In last week's *Journal* particular attention was directed to the fact that in the event of war the price of this metal would be greatly enhanced, and sellers should act cautiously in making forward engagements. Sellers have day by day been gradually advancing their prices, and would only sell in moderate quantities; some sellers have for the time being entirely withdrawn. Spanish is also very difficult to buy. Prices are nominal.

SPELTER.—This metal is held firmly in anticipation of realising higher rates, and it would be perfectly useless to attempt to treat for anything beyond the most trifling quantities. Prices cannot be relied on from one hour to another.

STEEL.—If the German manufacturers are prevented sending forward supplies there may be some hope for Swedes keg coming again into request, and realising higher prices.

TIN.—Quotations are very wide, and a considerable reduction would have to be made to effect sales of either English or foreign. We should not be surprised to see the market utterly collapse upon the breaking out of war on the Continent, but which horrible calamity we sincerely trust, for the sake of the lives and welfare of our neighbours, may yet be averted.

THE COPPER TRADE.—Messrs. James and Shakspeare—The rumours of war, coupled with heavy charters from Chili, enabled the smelters to secure a large supply of furnace material on terms which leave a small margin on their official quotations for metal, and during the present week they have taken about 5000 tons of regulus, lying in Liverpool and Swansea, at 18s. 3d. per unit, and would have made further purchases had importers been willing to continue sales at the same figure. These transactions have given a firmer tone to the market, and prevented any important alteration in other sorts; Chili slab is quoted at a decline of 6s. to 10s. per ton on the rates current Friday last, and sales of about 400 tons, principally Lots and Urmeneta, reported within the last day or two at 67/4 10s. cash terms, but 5s. more has since been offered and refused for other good ordinary brands, of which 68/4 is the asking price, and at that figure about 100 tons were sold during the course of present week. On

Tuesday the Chili mail was delivered, and advised charters between May 18 and June 2 for 3600 tons pure, of which 1800 tons in bars and ingots, 1670 tons in regulus for England, and 116 tons in bars for France; the total charters for the corresponding period of 1869, were equal to 1412 tons pure. News have since been received giving the charters for eight days subsequent to the departure of the mail as only 290 tons pure, and it is, therefore, thought that the next advices will be moderate. Australian continues to be neglected, and the next few small sales reported in Wallaroo at 73/4 10s. per ton. Smelters are asking full prices for tough and selected, but will concede a trifle on braziers' sheets and sheathing for India.

Messrs. Vivian, Younger, and Bond.—The partial firmness noticed in our last report has this week disappeared. A few transactions have taken place in Chili bars at from 68/4 down to 67/4 10s. for good brands, and at the close there are no buyers at the latter rate. On Tuesday the Valparaiso letters of June 2 came to hand, advising that the charters for the fortnight were about 3600 tons fine copper—2000 tons in bars and ingots, and 1600 tons fine copper in regulus. The news of these large charters caused the importers to realise about 6000 tons regulus, for which they obtained 13s. 3d. per unit. We close this week under the fear of a continental war, and although copper would not perhaps suffer through it to any great extent, still business would be paralysed for a short time; consequently, the market is without animation, and our quotations for all descriptions must be considered as nominal.

THE TIN TRADE.—The Standards of Tin Ore were further reduced on Wednesday, and are now as follows:—Common, 12s.; superior, 12s.; fine, 12s.; and, 12s.; superior fine, 12s.

Mr. L. Th. van Houten (Rotterdam, June 30) writes.—The business reported during the past month in our tin market has not been very extensive, and hardly any fluctuation has taken place in the value of the articles. The deliveries of tin, both Banca and Billiton, are again very satisfactory. The position of Banca tin in Holland on June 30, according to the official returns published by the Dutch Trading Company, was—

	1870.	1869.	1868.
Import in June	24,823	3,173	4,045
Total six months	114,477	41,414	41,407
Deliveries in June	12,626	4,500	13,100
Total six months	73,516	45,951	68,337
Stock second-hand	66,135	96,569	95,572
Total stock	164,614	134,736	162,538
Stock of Billiton	4,173	7,814	12,238
Import in June	8,198	6,100	7,227
Delivered and shipped in June	10,725	5,200	—
Quotation (Banca)	78 1/4	79 1/4	54 1/4
June 30. (Billiton)	77	77 1/4	53 1/4

These returns, compared with those of 1869, exhibit an increase of the import for June of 67 tons, an increase of the import for the six months of 2,083 tons, an increase of the deliveries for June of 254 tons, an increase of the deliveries for the six months of 768 tons, a decrease of the stock second-hand of 949 tons, an increase of the stock of 1914 tons, an increase of the total stock of 965 tons, a decline of the quotation of Banca of 16s. 6d. per ton. The quantity of Banca tin now afloat for the Dutch Trading Company is 800 tons, against 656 tons last year. We estimate the quantity of Billiton tin now afloat at 540 tons, against 459 tons last year. The Government returns for the month of April are as follows:—

EXPORT OF TIN FROM HOLLAND.		April.		Four months.	
		1870.	1869.	1870.	1869.
Germany	Tons	305	119	271	680
England	"	76	8	19	312
Belgium	"	325	52	166	921
France	"	16	12	34	32
Hamburg	"	3	3	19	18
United States	"	20	10	35	39
Other countries	"	29	30	35	39
Total	Tons	745	221	625	2085

The MINING SHARE MARKET has been moderately active this week without in any way being influenced by the panic which affected different securities on the Stock Exchange in the early part of the week to an extent greater than has been known for many years past. The settlement of the fortnightly account on Friday affected prices of a few mines, but, on the whole, it passed off well. The chief transactions have been in East Grenville, East Lovell, West Chiverton, Van, Van Consols, Tankerville, West Maria, Australian United, Great Wheal Vor, Prince of Wales, Marke Valley, Chontales, Pacific, Drake Walls, Providence Mines, and a few others. Tin has again declined 2 1/2 p. per ton. There was no sale of copper ore this week.

East Grenvilles advanced 1/4 p. per share, but leave of 3 to 3 1/2. The lode in the 75 east has improved to upwards of 50/4 per fathom, with every appearance, the agent states, of further improving. The stopes about the 55 are worth in the aggregate 8 tons per fm. Wheal Grenville, 2 1/2 to 2 1/2. In the bottom of the 90 there is a fine bunch of tin, worth 50/4 per fathom. In the new lode the 80 east is worth 30/4 per fathom; winze in 80 west 15/4 per fathom. Australian United have been firmer, and leave off 2 1/2 to 2 1/2. The advices are considered very favourable. The agents have every reason to believe they have wide field of wash (alluvial deposit), and if it turns out equally rich as that taken from the bottom of the shaft the shareholders will have no cause to regret the delay in the dividends. The next mail will bring the result of the washing of some parcels of this alluvial, as the machines were to be started in about a fortnight. From published returns we find the dividends paid by gold mines in Australia in the month of May were 56,182/4, of which 35,302/4 was from 35 quartz mines, and 20,879/4 10s. from 17 alluvial mines. The total dividends paid from January last to May 21 was 222,790/4. It was hoped in reference to Australian United that a telegram might have been received this week, in anticipation of the next mail; but the steamer has not yet reached the Port de Galle, though some days overdue, and fears are entertained for her safety.

Bedford Consols, 1 1/2 to 1 1/2; Bedford United, 20s. to 25s.; Chiverton Moor, 4 to 4 1/2. East Pool, 8 to 8 1/2; at the meeting, on Monday, the accounts showed a profit on two months' working of 1608/4, and a dividend of 1600/4 (5s. per share) was declared. West Maria and Fortescue, 2 to 2 1/2; the 71 east we understand is valued at 20/4 per fathom; the 60, 25/4. In the winze below the 60 the lode is worth 70/4 per fathom. Wheal Agar, 2 1/2 to 2 1/2; the lode in the shaft is valued at 70/4 per fathom.

West Caradon, 1/2 to 1; a call of 2s. 6d. per share was made at the meeting; the loss on the four months' working was 1316/4 11s., but the report generally was satisfactory; in the 55 fm. level a cross-cut has been driven 22 fms., and communicated with a winze below the 42, on Allen's lode, which varied from 1 1/2 to 2 1/2 tons of ore per fathom; the ends driving on this are worth 2 1/2 and 1 1/2 tons per fm. Cook's Kitchen, 19/4 to 20; at the meeting a dividend of 10s. per share was declared. Van, 76 to 78. Van Consols have been firmer, and leave off 3 1/2 to 3 1/2; at Little's shaft, in the eastern ground, towards Van, the agent considers the chances very great for meeting with a fine course of ore. West Pant-y-go, 15s. to 18s.; this mine is gradually improving, with one or two important points to come off; the lead and blende ores sold this week realised about 320/4; Ding Dong, 16 to 18; Drake Walls, 24s. to 26s.; Dolcoath, 132 1/2 to 137 1/2; East Caradon, 4 1/2 to 5 1/2.

Taquaril, 16s. to 18s. A call of 1s. per share has been made here. The directors regret that from unforeseen circumstances the machinery for draining the old workings, where the great shoots of gold were formerly found, have not been sooner erected, but the progress is good, and they believe that by the end of the year satisfactory returns will be received. East Lovells have declined to 3 1/2; 32 1/2; Great Laxey, 18 to 19; Great Wheal Vor, 10 1/2 to 11 1/2; Herodsfoot, 41 to 43; Hingston Down, 10s. to 12s. 6d.; New Seton, 35 to 40; North Crofty, 3 to 3 1/2; North Lovell, 6 to 7; Prince of Wales, 14s. to 16s.; Providence Mines, 38 to 40; South Condorow, 2 1/2 to 2 1/2; South Frances, 32 to 34; Spearne Moor, 18 to 20; Tankerville, 15 1/2 to 16; Tincroft, 34 to 35; Trumpet Consols, 26 to 27; West Chiverton, 5 1/2 to 5 1/2; West Seton, 125 to 130; Wheal Crebor, 12s. 6d. to 15s.; Wheal Jane, 52 to 54; Wheal Kitty (Leland), 13 to 14; Wheal Kitty (St. Agnes), 7 to 7 1/2; Wheal Mary Ann, 9 to 10; Chontales, 1/2 to 1. The remittance by mail is 407 ozs. of gold, obtained from 1083 tons of ore, averaging 7 1/2 dwts. per ton. The cost is \$5881, which includes \$1040 freight of machinery. Very little change has taken place in the prospects of the mines. Wheal Seton, 34 to 36; Wheal Ury, 2 1/2 to 3 1/2; Don Pedro del Rey, 2 1/2 to 3 1/2; Pacific, 6 1/2 to 7 1/2.

The market for Mine Shares on the Stock Exchange during the week has been agitated, in common with other markets, and the fluctuations have been considerable. Rumours of war have from day to day influenced prices, and at the close, to say the least, the prospects of peace were very unfavourable, if war has not actually been declared. Judging by precedent, should actual hostilities commence, the mining interests of our country will receive a great stimulus. During the last Russian and Italian wars metals advanced considerably in value, and there was an active business transacted in shares of dividend-paying mines. Home industries following as a national consequence, would generally be benefited by a continental war, in-

as much as it shuts out of competition with us Prussia and France, while Spain is a large producer of lead and other metals. Van shares have maintained their price, and an advance may confidently be looked for. The lode in the cross-cut in the 45 is worth over 15 tons per fm., and throughout the mine never looked better; price, 75 to 78. Pacific, 7 to 7½; the return of 3½ per share will be made in a few days, and the prospects of the company's mines are good. Sweetland Creek, ½ dis. to ½ prem., ex div.; the advices from the mines are good, and the profit being made of a satisfactory character. East Lovells have had a heavy fall—say, from 38 to 32. Tankerville, 15½ to 16½; the details of the meeting are reported in another column; the mine is very favourably reported on. Laxey are rather less firm. Taquaril and General Brazilian Companies anticipate favourable advices by the next mail, and shares are enquired for. Subjoined are closing prices:—Asheton, 4½ to 5½; Cae Gynon, 1½ to 2; East Lovell, 3½ to 3¾; Laxey, 17½ to 18½; Great Wheel Vor, 10½ to 11; Prince of Wales, 14s. to 15s.; Tan-yr-Alit, 2½ to 3; Van Consois, 3½ to 3¾; Tankerville, 15½ to 16; West Tankerville, 2½ to 3; West Chiverton, 53 to 54; Almada, par to ½ prem.; Anglo-Argentine, ½ dis. to ½ prem.; Anglo-Brazilian, ½ to ½ dis.; General Brazilian, par to ½ prem.; Don Pedro, 2½ to 2¾ prem.; Chontales, ½ to 1; Capula, 1½ to 1½; Cape Copper, 10½ to 11; Frontino, ¾ to ¾; Pacific, 7 to 7½; St. John del Rey, 21 to 23; Taquaril, ½ to ¾ prem.; Yudanmutana, ½ to ¾.

IRISH MINE SHARE MARKET.—The most noticeable feature in our Mining Share Market has been the fluctuation in the shares of the Mining Company of Ireland, since the general meeting of the company (as noticed in last week's Journal), when one of the smallest dividends ever declared by this company was resolved upon by a small majority over those proprietors who advised the prudent course of putting the trifling credit balance to next half-year's account. The shares of the Beerhaven Mine are not yet on the market, but those of the Mining Company of Ireland advanced fully 1½ to 2s. 6d. each, which was, however, not maintained, and has since been lost, the present price being 8½ to 9s., ex div. (7½ paid). Wicklow Copper (2½ to 2s. 6d. paid) shares were much steadier, although they have gone back during the last few days about 5s. per share, 9½ being the best offer obtainable at present. The shares of the General Mining Company for Ireland keep firm at their recent improvement of 3s., and are freely taken at 22s. 6d. to 23s. Connores shares are enquired for at 2s. Cape Copper shares stood for some time at 17½ to 18s. 6d., and have just advanced to 18½. All other stocks and shares on our market have been seriously affected during the last few hours by the telegraphic news respecting the continental war crisis.

The FLORENCE AND TONKIN UNITED MINING COMPANY is to be carried on under the Cost-book System with 12,800 shares. The object of the enterprise is to develop a valuable mineral sett, bounded on the east by the Prince and Princess of Wales, and on the west by Redmoor Mine. The mine was purchased under the liquidation of the old company, and is offered to the present at about the purchase price. The shares are to be issued at 2s. 6d. each, and a call of 1s. per share will be made in August. There is an excellent 25-in. cylinder engine now at work, and other necessary machinery and buildings, with tools, &c., are on the mine, and now become the property of the new company, who possess it at less than half its original cost. Four very promising tin and copper lodes traverse the sett from east to west for a distance of about 600 fathoms, while near its western boundary a lead lode of great promise crosses the sett from north to south, in a channel of ground which for the production of lead cannot be surpassed. The property has been inspected, and favourably reported upon, by Capt. Gilbert and Rickard. The machinery on the mine is in good condition, and of sufficient power for putting the mine down to a good depth and proving the side lodes, which are known to exist, and from which in all probability tin was returned by the ancients, as the workings are extensive on the backs. The prospectus will be found in another column.

The STAFFORDSHIRE BRICK AND TILE COMPANY, with a capital of 12,000l., in shares of 2l. each, has been formed to purchase and extend the iron-clay works of Messrs. Arnott and Co., at Wilnecote, Tamworth, also the London depot. The clay land extends over about 15 acres, the deposit is 60 yards in depth, and the lease is for 27 years. The Staffordshire bricks enjoy a high reputation in the market, and their capability to bear a pressure of from 90 lbs. to 100 lbs. per square inch renders them applicable where other bricks would be useless. The quality of the company's clay, combined with the capabilities of the machinery and plant, guarantees the supply of large quantities of plain and channelled bricks, plain and fancy tiles, drain pipes, &c., for which there is a ready market. With regard to profits, it is estimated that, taking prices at 10 per cent. lower than at present, a dividend of 15 per cent. upon the capital can be paid, and that by an extension of the works, which can be done at a small outlay, 20 per cent. per annum may be relied upon. It is mentioned that an advantageous contract has been entered into for the acquisition of the property, a great part of the shares has already been taken, and as the payments are to be made 1½ upon application, and 1½ upon allotment, there will be no further liability upon them. The share list will positively close on Wednesday, July 20.

The GREAT WEST CHIVERTON SILVER-LEAD MINE, Cornwall, was visited last week by a member of the board of directors, who is well acquainted with mining. He has returned thoroughly satisfied with the appearance of the mine, particularly at the deepest level, about 42 fms. from surface, and has brought some very fine specimens of lead ore, broken by himself, unassisted by interested advice. The specimens are at the company's office, 9, Dowgate-hill, Cannon-street.

At East Pool Mine meeting, on Monday, the accounts for April and May showed a profit of 1608l. 0s. 3d. A dividend of 1600l. (5s. per share) was declared, and 27l. 19s. 2d. carried to the credit of next account. [The agents' report is among our Mining Correspondence.]

At Marke Valley Mine meeting, on Wednesday, the accounts from April 13 to July 13 showed a profit of 2370l. 6s. 5d. A dividend of 2360l. (5s. per share) was declared. [The agent's report is among the Mining Correspondence.]

At Pendraves United Mines meeting, on July 7, a profit was shown on the four months' working of 3917l., the total credit being 3978l., but from this must be deducted the balance against the shareholders at the last account, 7048l., and also February merchants' bills, as resolved upon, and the real credit balance is but 650l., even without charging the labour and bills up to February only, whilst all the tin is credited up to the day of the meeting. A dividend was declared of 2500l., when at the same time the mine was, if the liabilities and assets were taken at the same date, over 10,000l. in debt! Protests against the accounts and against the payment of the dividend were entered, in conformity with the 5th clause of the Statutes Act, 1869. A very great improvement has, no doubt, been at last effected over the, until recently, ruinous mode of working this mine.

At Argoll Mine meeting, on July 8, the accounts for January, February, and March showed a debit balance of 2591l. 14s. 3d. Capt. John Grose and Robert Tyzzer say:—"During the quarter for which the accounts are now about to be audited we have had several serious breakages to our machinery, which have much increased the cost and impeded our progress generally. We have prepared about 30 tons of lead ore towards our next sampling, and also about 12 tons of good copper ore and about 90 tons of muddle." Capt. F. Puckey says:—"I cannot too strongly recommend that Michell's engine-shaft should be continued sinking so fast as possible, to open out deeper levels, as I consider you are now full 12 months behind with the sinking of the shaft, for had the shaft now been down to force on a 170 fathom level you would then be in a very good position, and I am confident you would then have a profitable mine."

COAL MARKET.—The supply this week has been extremely moderate, only 57 fresh ships having come forward. House and steam coals have been in increased demand, and prices of both quote 6d. per ton higher than this day week. Haswell Wallsend, 17s. 6d.; Eden Main, 15s. 6d.; Tunstall Wallsend, 14s. 9d. Unsold, 2 cargoes; 40 ships at sea.

The Bank of England returns for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT a decrease in the "notes issued" of 358,750l., which is represented by a corresponding decrease in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there was a decrease in the "public deposits" of 1,148,237l., and in the "other deposits" of 2,243,120l., together 3,391,357l.; an increase in the "seven day and other bills" of 22,637l.; and in the "rest" of 39,850l.; together, 72,501l. = 3,318,851l. On the other side of the account there was an increase in the "Government securities" of 69,931l.; and a decrease in the "other securities" of 2,881,688l. = 2,811,757l.; leaving a decrease in the total reserve of 442,860l.

KING ARTHUR (Silver-Lead).—The shares have been allotted during the past week. The workings on the north lode continue to look very well, producing about 1 ton of good ore per fathom, with every indication of a further increase. In the stopes the men are taking down some fine solid silver-lead, yielding about 20 cwt. to the

fathom, which will considerably increase the return of ore for the coming month; a parcel will then be ready for sampling, which it is expected will realise a high price per ton.

MESSRS. JOHN KNIGHT AND CO., COOKLEY IRON WORKS, near KIDDERMINSTER, beg to inform their numerous friends that all departments of their TIN-PLATE WORKS ARE IN FULL OPERATION AGAIN, and that they are thereby enabled to give prompt dispatch to ORDERS for TIN and TERNE PLATES and TINNED and TERNE SHEET IRON.

PARTNERSHIP—COAL TRADE.

A COLLIERY OWNER, extending his operations, DESIRES a PARTNER to CO-OPERATE with HIM. Twenty Per Cent. profits, and Five Per Cent. guaranteed during development. Apply to JOSEPH SIMPSON and Co., Public Accountants, 2, Cowper's-court, Cornhill, E.C.

TO CAPITALISTS.

THE OWNER of a LARGE and PRODUCTIVE COLLIERY, in the neighbourhood of Cardiff, is WILLING to DISPOSE of ONE-HALF SHARE on terms exceptionally advantageous. For particulars, apply, with references, to Mr. J. G. T. CHILD, Manchester or to CHILD, HORNEY, and Co., 27, Lombard-street, London.

METAL TRADE.

WANTED, a RESPECTABLE PERSON who UNDERSTANDS the TRADE, and who has been accustomed to an office in the City. Address, by letter only, salary required, and other particulars, to "A. B.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, a SECRETARY for a COPPER MINING COMPANY, with HEAD-QUARTERS in SCOTLAND, but whose operations are principally abroad. He must be a good correspondent, have a thorough knowledge of books and accounts, and some experience in mining affairs. A knowledge of chemistry would be a recommendation. An eligible party may make this the nucleus of a good business connection. Salary, £100 to £200, according to qualifications. Apply, in handwriting of applicant, stating previous employment and experience, to "Copper Mining Company, No. 101," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, a SITUATION by a Young Man who has been UNDERGROUND and SURFACE SUB-MANAGER of an IRON ORE MINE. Good testimonials from last employers. Address, "J. H.," Gresford Villa, Freehold-street, Fairfield, Liverpool.

WANTED, a SITUATION, as AGENT to MANAGE a LEAD MINE, by one who has had 18 years' experience, and is thoroughly acquainted with Dipping, Mapping, and Assaying Lead Ores, together with the general working of a mine in all its branches. Testimonials can be produced from high authority. Address, "J. W.," Isle of Man Times Printing Office, Douglas.

WANTED, a thoroughly PRACTICAL and EXPERIENCED ENGINEER. Apply, in writing, to Mr. P. COOPER, Holmes Colliery, Rotherham.

WANTED TO PURCHASE, a 9½ fm. 16 or 17 in. PLUNGER LIFT of PUMPS, complete. WANTED TO SELL, TWO 9½ fm. 10 in. LIFTS of PUMPS, complete. Apply to Messrs. WM. and JERU PERRY, Lew Down, North Devon.

PHOSPHATE OF LIME

WANTED, to WORK, either from a MINERAL FIELD at home or abroad, or PURCHASE in quantity, ready for shipment. Address, "M. M. B.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

TO IRONMASTERS.

AN OPPORTUNITY occurs in SOUTH WALES for RENTING a BLAST FURNACE, nearly complete, on very favourable terms, on a property having superior SMELTING COAL and IRONSTONE, with COKE OVENS, a SIDING to a RAILWAY, and in the immediate neighbourhood of HEMATITE ORE and LIMESTONE. For particulars, apply addressed letter box, 206, Post Office, Bristol.

SOUTH AMERICA.

AN INTEREST in a VALUABLE and EXTENSIVE MINING PROPERTY FOR SALE, to which a railway is now being completed. For particulars, address "G. and R.," care of Mr. B. Fothergill, C.E., 15, George-street, Mansion House, London.

POLISHING POWDER.

A CONSIDERABLE QUANTITY of PULVERISED MAGNETIC ORE, for CLEANING BRASS, STEEL, COPPER, PEWTER, &c., TO BE SOLD, BY PRIVATE CONTRACT. Samples, prices, and testimonials will be sent, carriage paid, on application to Mr. SCOTT, Dalgely, or to Mr. OWEN REES, Stationer, &c., Dalgely.

WELSH LEAD MINE.

FOR SALE, the LEASE of a VALUABLE LEAD MINE, close to the celebrated Van and Van Consois Mines, for £2000. A good lode has been discovered. Every information can be obtained on application to Mr. MATTHEW GREENE, Plumber's Hall, Old Broad-street, London, E.C.

FOR SALE, TWO HUNDRED SHARES, or under, in a paying LEAD MINE, that is opening out well. The shares are offered at prices that will return good profits on present working operations, with very promising prospects of much larger dividends. A rare chance for mining investors; machinery very complete. To view, and for particulars, apply to Mr. JOSEPH HOWARD, White Swan-yard, Cloth Market, Newcastle-upon-Tyne; or at Consett, Durham.

WHITE MARBLE AND LEAD MINES.

On LOUGH VEAUGH, co. DONEGAL, IRELAND.

TO LET, these PROMISING MINES. Have been opened, and the marble tested, and found excellent.

COAL MINE TO LET.—About THREE HUNDRED ACRES of that excellent COAL FIELD adjoining the mines now worked by the Irish Coal Mining Company, at BALLYLHANE, near ATHY, IRELAND. Station of rail and canal.

Apply to the proprietor, — P. G. ADAIR, Esq., Monasteraven, Ireland.

SOUTHALL, EALING, AND SHEPHERD'S BUSH TRAM-RAILWAY COMPANY (LIMITED).

Notice is hereby given, that the DIRECTORS have MADE an ALLOTMENT of SHARES, and that the AMOUNT DUE THEREON MUST BE PAID to the bankers of the company, the London and County Banking Company, 21, Lombard-street, E.C., or branch offices, on or before MONDAY, the 8th day of August, 1870.

Prospectuses, forms of application for the remaining shares, and all particulars, can be obtained at the City and local offices of the company.

By Order, JAS. W. THOMAS, Secretary pro tem.

Registered office, 1, Circus-place, Finsbury-circus, London, E.C., 8th July, 1870.

TUOLUMNE GOLD MINING COMPANY (LIMITED).

Notice is hereby given, that the SHARE CERTIFICATES are NOW READY for DELIVERY in EXCHANGE for the BANKER'S RECEIPTS. Shareholders should at once send their receipts to the company's office, when the certificates will be forwarded in exchange. By Order.

Temporary office, 1, Pinner's-court, Old Broad-street, London, July 14, 1870.

THE AUSTRALIAN MINING COMPANY (Incorporated under Royal Charter).

Notice is hereby given, that the TWENTY-FIFTH ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, E.C., on MONDAY, the 25th inst., at One o'clock P.M. precisely, to receive the report, accounts, and balance-sheet for the past year; to elect directors in lieu of Lieut. Colonel George Palmer and Frederick Collier, Esq., who retire by rotation; to fix the remuneration of the auditors for the past year; and to elect auditors for the present year.

By Order, GEORGE PALMER, Chairman.

No. 1, Coleman-street-buildings, Moorgate-street, London, E.C., July 11, 1870.

YUDANAMUTANA COPPER MINING COMPANY OF SOUTH AUSTRALIA (LIMITED).

EIGHTH ANNUAL MEETING. Notice is hereby given, that the EIGHTH ANNUAL GENERAL MEETING of this company will be HELD at the City Terminus Hotel, Cannon-street, in the City of London, on TUESDAY, the 26th day of July, 1870, at Twelve o'clock at noon, for the election of directors, in lieu of directors retiring by rotation, and of auditors, and for general purposes.

And, further, Notice is hereby given, that an adjourned SPECIAL GENERAL MEETING of the said company will be held at the time and place aforesaid, immediately after the conclusion of the said Annual General Meeting, for the purpose of taking into consideration the matters referred to in the notice convening a Special General Meeting on the 17th day of May last, of which the said intended Special General Meeting is an adjournment.

R. LOCK, Secretary.

66, Cannon-street, London, E.C., 14th July, 1870.

CAFARATHA LEAD MINING COMPANY (LIMITED).

Notice is hereby given, that the FIRST ANNUAL GENERAL MEETING of this company will be HELD on WEDNESDAY, the 26th day of July, 1870, at the offices of the company, 82, Great St. Helen's, at Three o'clock P.M.

By Order, HENRY W. PETCH, Secretary.

CHATWOOD, STURGEON, AND CO.,

ENGINEERS, &c.,
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Sole Manufacturers of the Patent Self-acting

ORE CRUSHING AND PULVERISING MACHINERY,

Patent Coal-getting Plant,
Patent Air Compressing Engines,
Patent Blowers and Exhausters, &c., &c.,
"Dead Blow" Steam Hammer.
Testimonials and Prices sent free on application.

GLASGOW OFFICE: 127 and 129, TRONGATE—

P. and W. MACCELLAN, Agents.

LONDON OFFICE: 33, CORNHILL, E.C.—

DONALD ATKEY and Co., Agents.

NOTICE.—Messrs. H. BAILEY, SON, and Co., late licensees of the PATENT "DEAD BLOW" STEAM HAMMER, having retired from their business of Engineers, have transferred their Steam Hammer Business and Plant to C. S. and Co., to whom in future all communications respecting Steam Hammers should be addressed.

THE SANDYCROFT FOUNDRY AND ENGINE WORKS COMPANY

(LIMITED),

SANDYCROFT, NEAR CHESTER,

MANUFACTURERS OF

STEAM PUMPING, WINDING, and every other description of ENGINE;
PITWORK, BOILERS, FORGINGS,
WATER WHEELS, CRUSHING and DRESSING MACHINERY, and MINING TOOLS
OF ALL KINDS.

Machinery in course of construction, and secondhand work, always on hand.

LONDON OFFICE.—Messrs. JOHN TAYLOR AND SONS, 4, QUEEN STREET PLACE UPPER THAMES STREET, E.C.

TO ENGINEERS, &c.

NEW MOTIVE POWER,
COMBINED AIR AND STEAM,

SAVING ABOVE FIFTY PER CENT. FUEL.

GALLOWAY AND COMPANY WILL GRANT LICENCES TO ENGINEERS to APPLY MR. G. BELL GALLOWAY'S INVENTION to all DESCRIPTIONS of ENGINES, as contained in his Patent dated January 7th, 1865.

For terms of Licence, address B. FOTHERGILL, Esq., C.E., 15, George-street, Mansion House, London.

PORTABLE AND FIXED ENGINES.

FOR SALE, PORTABLE AND FIXED ENGINES, from 4 to 25-horse power, warranted of first-class make and workmanship. Also, several SECONDHAND PORTABLES.

Apply to—LEWIN'S ENGINEERING WORKS, POOLE, DORSET.

FIRST-CLASS NEW HORIZONTAL STEAM ENGINE FOR SALE, 18 in. cylinder, 3 feet stroke (25-horse power), wrought-iron crank, £150. Apply to Mr. JOHN MOORE, 152, York-street, Cheetham, Manchester.

STEAM ENGINE FOR SALE.—A 36 in. cylinder ENGINE, 8 ft. stroke, equal beam, ONE 10 ton BOILER, and fly wheel 12 tons. The whole to be sold in One Lot. A great bargain. For further particulars, apply to Mr. JAMES HICKEY, 22, Austinfriars, E.C.

SOUTH EXMOUTH MINE, HENNOCK, DEVON.

FOR SALE, BY PRIVATE CONTRACT, the following, viz.:—40 in. cylinder PUMPING ENGINE. 25 in. cylinder WHIM ENGINE, with CRUSHER attached. 60 fms. 11 and 12 in. PUMPS in shaft. 30 fms. 11 and 12 in. PUMPS at surface. Timber, and various useful mining materials.

Apply to Capt. JOHN CORNISH, Frank Mills Mine, Christow; or to Mr. J. O. HARRIS, Public Accountant, 2, Gandy-street, Exeter.

FOR SALE, BY PRIVATE CONTRACT, at PAR CONSOLS MINE, near Par Station, CORNWALL,

EIGHT STEAM ENGINES.

Including ONE 80 in. (with BOILERS), for pumping, stamping, and drawing purposes; THREE HUNDRED PUMPS, from 6 in. to 20 in.; H and door-plates; hammered iron rod plates; rail, scrap, and cast iron; with a large quantity of useful MINING MATERIALS.

For particulars, apply to Capt. PUCKEY, at the counting-house.

WILLIAMS'S PERRAN FOUNDRY COMPANY, CORNWALL.

MANUFACTURERS OF PUMPING and OTHER ENGINES and GENERAL MACHINERY, have FOR SALE:—

ONE 36 in. PUMPING ENGINE, secondhand.
ONE 30 in. PUMPING ENGINE, secondhand.
ONE 8 in. HORIZONTAL HIGH-PRESSURE ENGINE, new.
Several Cornish BOILERS.

Also a large assortment of NEW and SECONDHAND PITWORK, at moderate prices.

LONDON OFFICES.—1 and 2, GREAT WINCHESTER STREET BUILDINGS, E.C.

MINING SETTS IN DEVON.

TIN, COPPER, AND LEAD, in the Manor of SHEEPSTOR, and LANDS in TAVISTOCK, HITCHURCH, PETER TAVY, LAMERTON, and LIDFORD. Water power. Terms, 21 years, renewable. Dues, 1-30th for Tin, 1-20th for Copper and Lead, reduced to 1-60th after a moderate outlay, until mines pay cost.

Apply to Mr. CATER, Solicitor, Plymouth.—Feb. 19, 1870.

LABORATORY OF ANALYTICAL CHEMISTRY,—4, THE CEDARS, PUTNEY, LONDON, S.W.

ESTABLISHED 1859.
ANALYSES and REPORTS on METALLIC ORES, METALS, &c., daily attended to by Dr. T. L. PRIPSON, F.C.S., Member of the Chemical Society of Paris, &c.

Terms moderate.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
June 29—	Tankerville	62½	£12 5 6	Pontesbury Smelt. Co.
July 1—	Minera	100	11 11 6	Walker, Parker, & Co.
—	ditto	100	11 11 6	ditto
—	ditto	36	11 15 0	Panther Lead Co.
—	ditto	34	12 0 0	ditto
—	ditto	100	11 11 6	Walker, Parker, & Co.
—	ditto	65	12 3 0	Panther Lead Co.
9—	Frank Mills	35½	15 3 6	Burry Port Company.
—	ditto	35½	15 3 6	Stock and Co.
—	ditto	46	12 0 6	ditto
—	ditto	3½	9 17 6	Slms, Williams, & Co.
—	Isle of Man Min. Co.	100	13 1 0	—
—	Cwmbyr	40	10 10 0	Slms, Williams, & Co.
14—	Talargoch	81	12 3 6	Walker, Parker, & Co.
—	ditto	128	13 6 6	Adam Eytton.
—	Trelogan	40	12 7 6	Walker, Parker, & Co.
—	Holywell Level	60	11 1 6	Adam Eytton.
—	Glan Alun	10	11 2 6	ditto
—	ditto	10	11 2 6	Walker, Parker, & Co.
—	Gladstone	15	11 0 6	Adam Eytton.
—	Parrys	5	11 8 6	Walker, Parker, & Co.
—	West Pant-y-go	29	11 5 0	Adam Eytton.
—	North Hendre	5	11 12 6	ditto
—	ditto	2	14 0 0	Walker, Parker, & Co.
—	True Blue	12	10 16 6	Adam Eytton.
—	South Pantyne	12½	10 16 6	Walker, Parker, & Co.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 1—	Minera	112	£4 0 0	Richardson and Co.
—	ditto	112	4 0 0	ditto
—	ditto	68	4 1 0	ditto
—	ditto	100	3 15 0	ditto
—	ditto	71	3 5 6	Bagillt Company.
—	ditto	84	3 5 6	ditto

Date.	Mine.	Tons c. q. lb.	Price p. ton.	Amount.	Purchasers.
July 9—	Penhalls	9 11 0	£21 5 0	£ 715 13 9	—

COPPER ORES.

NO SALE on Thursday last, July 14.
Copper ores for sale at the Royal Hotel, Truro, on Thursday next—Mines and Parcels.—Devon Great Consols 1325—South Caradon 502—Marke Valley 472—East Caradon 240—Brook Wood 230—West Wheal Maria and Fortescue 225—Wheal Friendship 191—Kelly Bray 170—Gunnislake (Clitter) 170—Bedford 140—West Caradon 122

EAST TANKERVILLE MINE (LIMITED).

In referring to Mr. ARTHUR WATERS'S advertisement, in the MINING JOURNAL of the 9th instant, the Secretary of the East Tankerville Mine (Limited) is actuated solely by the desire of showing that the same did not escape his observation.

The absurdity of any comment on the fatuous disclaimer of Mr. Waters must be patent to all who have read the reports.

For the information of those who have not done so, the following interesting report on East Tankerville Mine is reprinted.

The Lombard Exchange, London, E.C., 14th July, 1870.

REPORT UPON EAST TANKERVILLE MINE, BY CAPTAIN EDWARD DAVIES, AGENT OF PERKINS BEACH MINE.

June 16.—In handing you my report on this very valuable mineral ground, which I think cannot fail to be highly productive, I have much pleasure in calling attention to a few facts on which I base my opinion. Its position is certainly one very much to be desired, because it immediately adjoins the Tankerville Mine on the west, Perkins Beach on the east, and the Box and Pennerley Mines boundary on the south; consequently it is in the very heart of the best and largest mines in Shropshire, for, in addition to these, the Smallbeach Mine, on parallel lodes, is not far north. To dilate upon, as I readily could, all the numerous veins which pass through East Tankerville set would occupy much space, but I will confine myself to those marked upon the plan, and first as to those veins which are known as east and west, running through the breast of the set for about 200 fathoms each. The greater vein of Tankerville lode, as in that mine, north. I should not be doing justice to the value of this lode if I omitted quoting the words of Captain Arthur Waters, the manager of Tankerville Mine, who in his recently-published report on it stated: "This is unquestionably one of the greatest, if not the greatest, lead-producing lode in Shropshire. It is 20 to 30 ft. wide in places, runs nearly east and west, underlies scarcely 1 ft. in 4 ft., and, like the old Smallbeach lode, gets richer and richer as depth is reached. In the 42 ft. it yields 2 to 3 tons of lead ore per cubic fathom. In the 52 ft. level it produced 5 tons; the 62 ft. level, 7 tons; the 74 ft. level, 8 to 12 tons; the 84 fathom level, 20 tons; and now in the 92 ft. level, the width of the lode laid open, which is 3 ft., it is worth quite 30 tons of lead ore per fathom."

Again, so late as the 26th May, 1870, the manager reported—"This great deposit of ore is equal to our highest expectations, and from the splendid appearance of the bottom ends and sides of the shaft to-day we are certain to be able to sample 150 tons for June working." And under date of 1st June, 1870—"The great lode continues to yield wonderfully, and we are astonished to see the quantities of rich lead stuff weighed into the bins from the small mark we have made in the ground. We have been stripping down the lode which was standing against the hanging wall of the shaft when I last advised you on this head, and the only difficulty we have is to describe the value of the great ore course in words that shall be believed." After traversing the Tankerville set, this great lode passes directly into East Tankerville, and is the only lode therein which has been worked. Birch's vein, as costained upon Perkins Beach set, is found to be parallel with the Great Spar vein, and traverses East Tankerville set. It is a very fine galena vein, and good stones of lead ore have been raised from it, one of which was upwards of a hundredweight.

Great Spar vein underlies south, and therefore in depth in this set the Tankerville lode will form a junction with it. From my intimate knowledge of the Shropshire mineral district I believe the Great Spar lode to be the nearest champion lode to Smallbeach. It has precisely the same characteristics. Its width near the surface averages 10 ft., and the barytes and carbonate of lime come up to grass interspersed with lead. So valuable is this lode considered that in the Perkins Beach Mine a cross-cut is being driven with all dispatch to intersect it. Cross vein is about 80 fms. north of Great Spar, parallel to it, and has been worked. From this vein and its counters upwards of 3000 tons of lead ore were raised in Perkins Beach Mine in a very small space of ground, and is still yielding good ore. Ox Clay and Birchill veins have been costained upon, and were found very well defined. In addition to these we have the counters lode, "Burgum Vein" and "Pennerley Quarry Vein," which are known to traverse this set, and in so doing as will form very valuable junctions with the Great Spar and Birchill veins. All practical miners look to junctions and counters lodes for vast deposits of ore. East Tankerville is rich in this respect. First the underlie of the Tankerville lode being north, and those of Birch's and the Great Spar south, will bring these three together in depth, at which points there can be no doubt of very good results. Few mines can be approached so advantageously as East Tankerville. Its adit level being near to the Great Spar lode is very important, as when that is reached and opened out upon east and west we can determine the point of the cross-cut for intersecting the veins lying north and south of it, as the rise of the mountain is so rapid that in a short distance the backs on the lodes become great, until a height exceeding 200 yards is attained. The Shropshire district being so well known, I refrain from speaking of the goodness of its roads and proximity to coal and railway.

EAST TANKERVILLE MINE (LIMITED).

A PROSPECTUS of this PROPOSED COMPANY will be FORWARDED on application being made by post, addressed to the offices, Clarendon Street, Shrewsbury; or to the undersigned at the Lombard Exchange, Lombard Street, London, E.C., 14th July, 1870.

JOHN R. R. KEANE, Secretary.

THE FLORENCE AND TONKIN UNITED MINING COMPANY.

In 12,800 shares, on the Cost-book System.

PROVISIONAL COMMITTEE.
EDWARD NICOLLS, Esq., Solicitor, Callington.
JAMES PEARCE, Esq., Merchant, Tavistock.
WILLIAM BROWN, Esq., Surgeon, Callington.
PURSER—MR. THOMAS VOSPER, Callington.
BANKERS—Messrs. DINGLEY AND CO., Callington.

This mine having been sold in liquidation of the old company, the purchasers, believing it to be a very valuable mining property, and one which has really had no trial beyond a point where success might be anticipated, have bought it as a going concern; and are now resolved to offer it to the public at about its purchase price. Their object being the immediate formation of a good company, to work the mine in a vigorous manner.

An excellent new 25-in. cylinder engine was erected thereon about four years ago, which is now at work, and other necessary machinery and buildings, with tools, &c., are on the mine, and now become the property of the new company, who possess it at less than half its original cost.

The mine is laid open to a depth where great success may be speedily expected. In the Wheal Tonkin part of the set an excellent tin lode was opened on to a depth of 22 fathoms some years since, but was abandoned from the very low price of tin.

Four very promising tin and copper lodes traverse the set from east to west, for a distance of about 600 fathoms; while near its western boundary a lead lode of great promise crosses the set from north to south in a channel of ground which for the production of lead cannot be surpassed. This lode can be reached by a continuation of the 25 fathom level, west from the present end, of about 30 fms., a point of great interest, from which may be anticipated good results.

The shares are offered at the nominal price of 2s. 6d. per share, and a call of 1s. each (250) will be made early in August, to pay cost for the ensuing four months, from July 1, 1870.

It is estimated that from £100 to £170 monthly will give the mine a spirited working, and that twelve months will, probably, lay open a very valuable property, while returns of copper ore will, it is believed, be immediately made, with daily chances of improvement as the mine is being opened.

It must not be forgotten that the very excellent lode of the Princess of Wales runs through the whole length of this set, at a very short distance from the engine-shaft.

More than one-half of the shares are taken by local parties, with whom are many of the old company, thus showing their great confidence in the concern. There can be no doubt of these shares being immediately issued.

Applications for shares should be at once made, accompanied by a remittance, to the bankers of the company, or to the purser.

The Clifford Amalgamated Mines, June 16, 1870.—I have carefully examined the past and present operations in this mine, and beg to send you my report thereon. This set is situated in the parish of Callington, and is extensive. The locality has been very rich for copper, lead, and tin. The set is 14 fms. long, east by the Prince and Princess of Wales, at present young but favourite mines; on the west by Redmor Mine, which was formerly very rich for lead ore, and now at a very shallow level is about paying cost for tin; on the north by Holm-bush Mine, which in the last working gave a very large profit for copper ore, and is in the same parallel with Kelly Bray and Kit Hill.—Smith's Lode: There has been an adit driven from the foot of the hill 10 fathoms east on this lode, towards Saw's shaft; the lode is from 2 to 3 feet wide, and has produced at this level (about 40 fms. from surface) a considerable quantity of good copper ore, and some parcels of good arsenical and sulphurous muffle. The 25 ft. level has been driven west of the shaft 60 fms., and has produced several tons of copper ore and muffle; the lode in this end is composed of prisms, muffle, and stones of copper ore, a very strong and promising lode; there is a cross-course only a few fathoms ahead of this end, which very much improved the lode in the adit level. The 25 ft. level is driven east of shaft 20 fms.; the lode at this level from a few fathoms of ground produced over 20 tons of good copper ore. This ore was made in connection with another cross-course east of the shaft. The 45 ft. level is driven west of shaft 25 fathoms; the lode in the end is 3 feet wide, producing a large quantity of muffle and stones of good copper ore. The 45 ft. level east of the shaft 29 fathoms, and produced several tons of good copper ore. The 55 ft. level is driven 9 fathoms east of the shaft, and the cross-course has just been intersected; they are now cutting south in search of the lode; and judging from the upper levels, I should think it probable that when the lode is met with it will be found productive. There has also been a shallow adit driven north about 40 fathoms, and intersected the Smith's and Knowling's lodes, both lodes have been opened on and found productive. Knowling's lode has been driven east of this shallow cross-cut 70 fathoms to Verran's engine-shaft; the lode is from 2 to 4 ft. wide, and looking very promising for producing copper. This level only 10 fms. from surface produced over 50 tons of good copper ore, and the lode has never been seen under this place at any deeper level. The deepest part of this mine is now only about 30 fathoms from surface, just the depth of the adit level in many mines, and the lode has presented encouraging appearances, rarely to be met with at such a depth. You will perceive from this report that the ore has invariably made about the cross-course, which induces me to believe that if the eastern ground was worked near the great cross-course that made Holm-bush Mine so productive similar results at a moderate depth will be met with, and I believe if the bottom of the mine is properly prosecuted that any company of adventurers will be very soon repaid for their outlay.

Florence and Tonkin United Mines, June 20, 1870.—Saw's engine-shaft is sunk perpendicularly by 35 fathoms below the deep adit, or 55 fathoms from surface, in a good channel of mineralised killas. The 55, or bottom level, is driven east about 9 fathoms from shaft, and has just passed through the cross-course, which has at present discovered the lode. There was a similar change in the level above previous to entering the ore ground, and looking at these changes I have every reason to think a great improvement will take place in this end as it ad-

vances from the influence of the cross-course. The 45 ft. level is driven west of shaft 20 fathoms; the lode for the whole drive is presenting a very kindly appearance, producing in places good stones of copper ore and muffle. In the present end it is 3 feet wide, consisting of capel, peach, and muffle, spotted throughout with rich quality copper ore. I may here remark that there is about 10 fathoms more to drive at this point to reach the lead lode, which is showing a very promising appearance in the level above, and which, in my opinion, will prove highly remunerative when seen at a deeper point of operation, by its being fairly opened out both north and south on its course. The 35 ft. level east and west of shaft 80 fathoms, and in places good deposits of ore and muffle have been met with; the lode in each of these ends is of a most promising character (the western end particularly), which is full 2½ feet wide, composed of capel, quartz, and peach, heavily charged with arsenical muffle, and containing good stones of copper ore. Verran's engine-shaft is situated about 100 fathoms east of Saw's shaft, and is down 15 fathoms below the shallow adit, or 33 fathoms from surface. The lode in and around this shaft is showing a very strong and healthy appearance, being in places above 5 ft. wide, and found to produce ore, more or less, at every point explored, and depth, in my opinion, is only required in this part of the mine to make it a valuable property. In conclusion, I beg to say the machinery on the mine is in good condition, and of sufficient power for putting the mine down to a good depth, and proving the side lodes which are known to exist, and from which in all probability tin was returned by the Saw's shaft, and the workings are extensive on the backs thereof. Although the different ends on the copper lodes are not at present producing much ore, yet they are presenting all the elements necessary in my opinion to ensure a successful future, and I am fully persuaded that a more spirited and extensive development is all that is necessary to make Wheel Mary Florence a lasting and profitable mine.

Captain RICKARD.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accurate and useful work of reference.

DEEPEST COLLIERY, AND MOST EXTENSIVE WORKINGS.—The deepest coal mine in the world is probably that of Simon Lambert, in Belgium, which has attained the great depth of 3495 feet. The deepest coal mine in England is the Roscliffe Colliery, in Lancashire, which has reached a depth of 2418 feet. The depth of the Dufkinfield Colliery, Cheshire, is over 2050 ft.; and the Monkwearmouth Pit, Durham, is nearly 2000 ft. The galleries in the Killingworth Mine, near Newcastle, measure upwards of 160 miles. At one colliery, near Newcastle, the passages measure more than 20 miles; and at St. Hilda Colliery, South Shields, the workings equal 70 miles in gallery extent. At the Howgill Colliery, near Whitehaven, the workings have been carried on more than a thousand yards under the sea. A recent account of some American mines says that the deepest excavation in the United States is the copper mine of Minnesota, near Lake Superior; it is 1300 ft. deep. A very interesting paper "On Coal Mining in Deep Workings," by Mr. Emerson Balbridge, was published in the Supplement to the Mining Journal of May 28.

PROSPER UNITED.—Will some one interested inform me what progress is being made towards the winding-up and settlement of the affairs of this company?—SHAREHOLDER.

PRICE OF COPPER.—"W. H." (Glasgow).—The official price of tough cake copper on July 5, 1867, was, as stated in the Mining Journal of the following day, 93s. per ton. In the first week in July of the preceding ten years it was 185s., 84s., 112s., 98s.; 1853, 107s., 10s.; 1854 and 1855, 126s., 145s., 107s., 10s.; 1857, 117s.; 1858, 107s., 10s.; 1859, 107s., 10s.; and 1860, 124s., 10s.

BORAX LAKE OF CALIFORNIA.—A detailed article, descriptive of this extraordinary Lake, was given in the Supplement to the Mining Journal of March 2, 1867.

PACIFIC MINING COMPANY.—Why does not the Chairman of this company fulfil the promise he made to the shareholders, by informing them of the condition and prospects of the mines, as shown in the reports? From the violent and incessant fluctuations in the price of the shares, it is some a question whether it is altogether desirable that members of the Stock Exchange should be members of a board of directors?—A SHAREHOLDER.

NOTES ON CONTINENTAL MINING.—We are compelled to postpone the publication of the fourth of this series of papers until next week's Journal.

NAPHTHALINE is a waste product occurring in large quantities in gas works. The problem is how to utilise it. Dr. Ott has examined its properties with this object. Pure naphthalene is similar in appearance to alabaster, cracks easily in the warm hands, and becomes negatively electric on being rubbed with silk. It melts at 79° F., and boils at 452° F. Molten naphthalene absorbs a large quantity of air, which is given off again on cooling; according to Mr. Vohl this gas is pure oxygen. Molten naphthalene dissolves indigo with great facility, forming a dark blue violet liquid, from which the indigo separates on cooling, forming fine shining needles like copper. The amorphous sulphides of arsenic, tin, and antimony are also readily dissolved, and likewise phosphorus, sulphur, iodine, the iodide and chloride of mercury, arsenious, stannic, benzoic, and oxalic acids. Professor Asa Gray has thoroughly tested and obtained satisfactory results, proving that naphthalene may be advantageously used in museums, herbariums, &c., instead of camphor, as a very effective protection against moths and other insects.

MINERAL WEALTH OF IRELAND.—The proposed series of papers will be very acceptable.

Received.—"P."—W. Copp—"G. H."—"Reader"—"T. W. R."—"M. G."—"J. R."—"Verax."

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JULY 16, 1870.

GOVERNMENT INSPECTION OF MINES.

The number of casualties connected with colliery operations which occurred during 1869 was shown in the abstract of the Reports of the Inspectors, published in the Supplement to last week's Mining Journal, and a careful perusal of the particulars given cannot fail to afford an abundance of material for reflection. It will be seen that explosions are not most numerous in the most fiery pits, that the number of shaft accidents do not diminish, and that the automatic apparatus devised to prevent them add nothing to the safety. That the ability of the colliery officials and the system of working appear to be beyond question, and it also seems that the systems which theory points out to be the safest are in practice the least safe. Thus, in South Durham they can raise 197,924 tons of coal at a sacrifice of only one life; in Yorkshire each 157,877 tons raised costs one life; and in West Scotland the casualties are in about the same proportion, 157, 60 tons costing one life; in east Scotland, which in 1868 was safer than any other district in the kingdom, one life was lost for every 146,552 tons raised; in Northumberland, Cumberland, and North Durham 145,750 tons were raised for each life lost; in North Stafford, Cheshire, and Shropshire, 124,000; in Derby, Nottingham, Leicester, and Warwick, 103,846 tons; in South Stafford and Worcestershire, 100,076 tons; in North and East Lancashire, 92,368 tons; in Monmouth, Gloucester, Somerset and Devon, 91,912 tons; in South Wales, 50,718 tons; and in West Lancashire and North Wales, only 34,269 tons were raised for each life lost; though compared with the preceding year even this figure is an improvement for Mr. HIGSON'S district.

The examination of these figures will show that the accidents have certainly not been less numerous in the districts where long wall working is the rule; nor does the natural danger or safety of the seams wrought seem to have any important influence upon the death rate, whether considered in relation to the number of tons of coal raised or to the number of men employed. The average number of tons of coal raised for each life lost remains about the same, and the number of deaths amongst a given number of men employed has continually increased since the inspectors have given the figures.

The subjoined table will show the extent of increase.

Year.	Total males employed.	No. employed per life lost.	Total tons of coal raised.	Tons raised per life lost.
1864.....	307,542	395	95,121,919	109,715
1865.....	315,451	377	98,911,163	100,319
1866.....	320,663	374	100,724,881	67,877
1867.....	333,116	367	105,077,743	88,300
1868.....	348,820	348	104,566,959	103,429
1869.....	345,416	309	108,003,482	96,777

It may be well to mention the Ferndale explosion occurred in 1866, and the Oaks and Talke-o-the-Hill explosions in 1867; so that with regard to collieries generally the observation that the tons raised per life lost remains about stationary is justifiable. It has often been observed by practical men that the death rate increased in proportion as the men receive higher wages and work fewer hours per week, and the figures appear to some extent to bear out the conclusion. Whether this arises from increased encouragement to intoxication, which the observations of Mr. HIGSON would seem to indicate; or to the neglect of the colliers to apply the means of safety provided for their use; or to the introduction of the system of blasting on both sides to avoid the legitimate labour of cutting, has yet to be ascertained; but from the fact stated by Mr. DICKINSON, that more than one-half of the whole fatal accidents are from falls of roof and coal, it seems evident that the unnecessary sacrifice of life is entirely due to the men themselves. Let the endeavour be made to ascertain how it

happens that it is precisely that class of accidents under the direct control of the men that lead to the largest number of deaths. In 99 mines out of 100 more lives are lost in the shafts than from explosion; and the deaths from explosion are not half so numerous as deaths from falls of roof and coal; yet, because explosions are somewhat more sensational, they attract more attention from the public, and, perhaps, cause more important matters to be neglected.

No one who is accustomed to the interior of a colliery can doubt the accuracy of Mr. HIGSON'S observation, that underlookers and firemen are not, as a rule, sufficiently educated or trained to the strict observance of duty, though he must confess there are many really first-rate men among them. He finds a great absence of proper discipline below ground. Orders, when given, are not carried out, and are frequently altogether disregarded by the men. In making an examination before igniting shots firemen content themselves by examining one place only—namely, that in which the shot has to be fired—instead of examining those on every side. Any underground officer who issues the instructions should never neglect to see at once that they are properly obeyed. It is not possible to estimate the value of discipline too highly; it is a most important element of success. The men, young and old, should have this constantly impressed upon them; the special rules should be read and explained to them regularly; and the conduct of the under officers as to sobriety and punctual attendance to duty should be constantly observed and properly regulated. Now, although Mr. HIGSON suggests increased supervision for the under officers there is little doubt that they are not alone to blame. Men are now slaughtered for an idea, the masters being, as it were, compelled to appoint popular men from the ranks of the colliers to the position of officers, almost regardless of the ability they may possess. As a rule, steady intelligent colliers do not obtain the esteem of their fellow-workmen so readily as less industrious men, who prefer talking to hard work; yet if a master attempts to exclude a mere talking collier from office he risks the charge of being antagonistic to his workmen's interests, and the stoppage of his works in consequence. Until the workmen are wise enough to enact among themselves that no man shall represent them as their delegate unless he works during six months in each year in the mines accidents, preventable by the discretion of the men, will continue without material diminution.

That the increasing difficulties of coal mining have been encountered without much additional loss of life proves that much has been accomplished by Government inspection, yet further improvement must be looked for, not from augmenting the number of Inspectors, but from seeing that working instead of talking colliers are promoted to be officers.

IMPROVED BLAST-FURNACE.

Messrs. J. and G. ONIONS, of Dudley Port, have recently completed the erection of a blast-furnace, designed to effect the consumption of the waste gases, after the manner of those in the Cleveland iron district. The furnace was commenced in January, and was put into operation ten days ago. It is of much larger dimensions than those ordinarily in use in the Black Country, being 50 ft. high and 13 ft. 6 in. in diameter at the bosh. The mouth is closed, but two massive tubes carry the smoke and flame to the hot-air apparatus and the boiler respectively. By this plan the saving of fuel and labour is, of course, very considerable. Mr. ONIONS estimates the saving of slack at 120 tons per week, of the aggregate value of 30L. The following labourers are also dispensed with—four firers, four boat unloaders, one bridge-stacker, one coal wheeler, and one ashes wheeler. There is no escape of smoke whatever, and the furnace contrasts strangely with those around it, each of which is polluting the air with sooty volumes by day and night. We noticed seven tuyeres on the furnace: ordinary furnaces have five. By having the greater number, however, a more equal distribution of the blast is effected. The furnace is now producing all No. 1 grey iron, for melting purposes, but it is intended ultimately to confine its produce to forge-iron. The present rate of production is 180 tons per week, being nearly double that of the old-fashioned Black Country furnaces. The cost of the new furnace, in erection and plant, is about 2000L. more than those on the old principle. The contiguous buildings are all on a complete and substantial scale. The stack is 150 feet high, 9 feet clear inside at the top, and has a base of 16 feet square. The design is entirely by Mr. ONIONS, and it infringes no patent right whatever. Many of the principal ironmasters in the district have been to see the furnace in operation, and express themselves satisfied with its success.

SIR ANTONIO BRADY'S IRON—"SEELY'S PIGS."—At the Working Men's International Exhibition, at the Agricultural Hall, Islington, one object of especial interest is a display of specimens of iron obtained, by a process invented by Sir Antonio Brady, from some of that dockyard refuse irreverently described as "Seely's pigs," and which has been the subject of discussion both in Parliament and by the press. These pigs were of different qualities, but were all largely contaminated with phosphorus and sulphur, and were supposed to be of little or no value. The presence of phosphorus renders iron brittle when it is hot, the presence of sulphur renders it brittle when it is cold. The pigs containing both were worth in the market about 2L 5s. a ton. By Sir Antonio's process the sulphur and the phosphorus can be extracted at a cost of about 35s. a ton, and the residual iron is superb. It bears any and every test. One of the pieces exhibited had been beaten cold to the thinness of writing paper at one end, drawn to a point at the other, and then twisted by hand eight turns in an inch at a single heating. Massive bars had been beaten cold until the surfaces on each side of the bend came into perfect contact, and a plate 6 in. wide and 4 in. thick had been beaten till its edges were in contact, the flat surface remaining horizontal. In neither case was there any trace of a flaw either at the convexity of the curve, where the metal was stretched, or at the concavity, where it was compressed. Holes in a thick plate had been enlarged by driving cones into them, and, in a word, the iron had been knocked about in every possible way. At a very low estimate it is worth 1L a ton, and as there is plenty of the raw material to be had the profit of the invention seems likely to be great.

THE VICE-WARDEN OF THE STANNARIES.—Mr. E. SMIRKE, the Vice-Warden of the Stannaries of Cornwall and Devon, has resigned his appointment, which is worth 1500L. per annum. He has for a long time been in delicate health. The appointment is in the gift of the Duke of Cornwall.

GOLD MINING IN CALIFORNIA.—An opportunity is now afforded for the prospects of the Californian gold mines in which English capitalists are interested being, as it were, officially ascertained. Colonel BERTOS, the Vice-Consul of France in California, has been charged to investigate in his official capacity the position and prospects of the Californian gold mines, because for some time past neither dividends nor satisfactory information has been obtainable. On Tuesday a meeting of English shareholders in Californian mines was held, and it was resolved to accept Colonel BERTOS'S services to investigate all Californian mines in their names, and in the same manner as he has been entrusted to do it by French shareholders in his capacity of Vice-Consul, with the aid of a competent engineer expressly appointed for the purpose. We may, therefore, expect to receive some reliable information.

PETROLEUM.—One of the most remarkable cases of the rapid growth of a new industry is that of the production of petroleum in Pennsylvania. The American papers publish statistics of the trade, which show that the total production for the past year of the Pennsylvania region is estimated at 3,516,366 barrels of 42 gallons each. The export for the year 1869 of refined and crude petroleum was 2,569,715 barrels, against an export in 1861 of only 37,000 barrels. It is remarked that while the production has increased the shipments abroad have also increased, so that by accident or design the relation of supply and demand is regulated with an exactness which is not in the same degree manifest in any other commercial commodity.

BOILER EXPLOSIONS.—During his examination before the Select Committee of the House of Commons, Mr. BARKER, the owner of about 80 boilers, said that there were 10,000 boilers in the Staffordshire district. At many of the large works in South Staffordshire the proprietors had a body of boiler-makers, engineers, and inspectors, and said they had all the appliances of inspection within themselves; but witness would much prefer an independent inspection, which would, no doubt, tend to diminish the number of accidents, but would not entirely prevent them. The association had a staff of organized inspectors, well acquainted with the class of boilers in use in the district, and no doubt, their inspection would prove advantageous. He was not prepared to say that inspection ought to be made compulsory. The association believed to be fully competent to carry out boiler inspection, and he thought they could do it better than Government. There was a difficulty, no doubt, in the fact that some steam users did not take advantage of the inspection by

the association, but he could not say that compulsion ought to be used in such cases. Some pressure, short of compulsion, might, perhaps, be devised to meet that difficulty. In his opinion, all boilers ought to be inspected, but it should be done, if possible, without Government interference, and with the least possible annoyance to the owners of boilers. He could not say as yet any way how universal inspection was to be obtained without the objectionable alternative of compulsion, but he believed it would be found that the number of inspected boilers was increasing daily. It might be a public advantage if the inspection could be done through the medium of the Midland Steam-Boiler Inspection and Insurance Association, and others of a like character.

REPORT FROM MONMOUTH AND SOUTH WALES.

July 14.—The position of the Iron Trade in this district continues most satisfactory. At all the works the same degree of activity is exhibited as has been witnessed for several weeks past. In the manufacture of rails there is a particularly brisk business doing, and makers' books are kept well filled with orders; and there is little doubt but that towards the end of the shipping season a press of specifications will come to hand, which will in all probability have some effect on prices; the requisite caution will, therefore, be exercised by manufacturers in the few engagements they may enter into in the meantime. Although very large clearances are still effected to the United States, makers are not quite so much pressed with their connections in that quarter, and more attention is accordingly given to the Russian demand than has been the case for some weeks past, so that the quantities of railway iron forwarded just now to the Muscovite markets will bear more favourable comparison with those of four or five weeks ago. In respect of most of the principal sources of demand, the prospects of the trade are encouraging, and a lengthened period of prosperity is looked forward to. Some interruption in continental enquiries might be apprehended, however, owing to the disagreeable position which affairs have unexpectedly assumed between France, Spain, and Germany, but it is satisfactory to find that later information supports the hope that the disagreement of the nations may yet be arranged, and that the war which seemed for a few days inevitable will yet be avoided. This circumstance has not, however, been without its influence in the market, as may well be expected, makers having already shown some inclination to restrict transactions. In the home trade there is not much further improvement to note. Rail contracts are coming in slowly. At many of the iron works facilities for the manufacture of steel rails are being increased, and it is likely that this superior material will eventually be more generally used on the permanent ways of this and other countries. For pig-iron a good sale is effected at the advanced prices. Bars and the miscellaneous descriptions of make command only a slow enquiry. The prospects of the Tin-Plate Trade are becoming more hopeful, a downward tendency being now evinced in the price of tin, and, with the advance of 1s. per box for plates, recently agreed upon by the Quarterly Meeting at Gloucester, tin-plate makers will derive greater profits on their production, and will thus be enabled to carry on their operations with greater freedom.

The position of the Steam Coal Trade is scarcely more satisfactory than reported last week. The demand is characterised by irregularity, which, of course, entails irregular working at the pits. The belief is, therefore, more prevalent that the advance in wages was a hasty move, and that the consequent rise in the price of coal has brought the trade to its present unsatisfactory position. The House Coal Trade remains quiet.

It will be remembered that subsequent to the recent explosion at the Morfa Colliery, the property of the Messrs. Vivian and Sons, the pit was found to be on fire, and the workings had to be abandoned, and, in consequence, the bodies of some of the unfortunate sufferers remained in the colliery undiscovered. Soon afterwards the manager, Mr. Grey, determined upon sinking the shaft from its depth of 180 yards to a total depth of 400 yards, which would be the only means of rendering the colliery workable. The work of sinking was according to proceed rapidly, so that a few days ago the shaft had been immersed in mud and water, and were in a remarkable state of preservation; and the position in which the bodies were found afforded strong proof of the accuracy of the theory propounded by the Government Inspector, Mr. T. E. Wales, at the enquiry before the coroner. The theory was to the effect that a small quantity of gas had lodged in the air-engine house, which by coming in contact with the naked gas lights ignited and fired the 60 lbs. of blasting powder which was said to be stored within 7 or 8 ft. of it. The body of a man who was known to be near this spot when the explosion occurred was found to have been blown inwards and down the pit, which showed that the explosion was behind him, and confirmed the opinion that the catastrophe was caused more by the explosion of the powder than that of gas.

Some local interest is attached to the case of Tiden and Others v. Sendamore, which came before Mr. Justice Brett and a special jury in the Court of Common Pleas on Wednesday. The action was brought against the defendant, who is the secretary of the Rhymney Iron Company, to recover damages for the non-delivery of 2000 tons of Russian rails, with fish-plates. It was shown that on the 6th of April, 1869, the Rhymney Iron Company entered into an agreement to supply the rails and ship them at Cardiff for Russia between the 3d of August and the 15th September. The contract was admitted, but the company said that it had been rescinded. It appears that the plaintiffs could, by the construction of the contract, alter the pattern of rails to be delivered, and on the 3d of August a letter was handed by Mr. Tiden to Mr. Sendamore, altering the pattern, which caused defendant to state that more time would be required for delivery, but no reply was made. It was decided that no alteration in time was made, and a verdict for 113l. 2s. 9d. damages was returned.

In the case of Brown v. Collins, recently heard in Vice-Chancellor Stuart's Court, the administration was involved of property of the value of 1,500,000l., sterling, consisting of real property at Dole and elsewhere, estimated at 250,000l., and partnership property in the Trades Iron Company, the property of the late Mr. Forman. One of the executors, Mr. W. A. Collins, presented a petition praying that the partnership property might be directed to be sold. The Vice-Chancellor, however, held that a direction for sale would be premature, and ordered enquiries to be made as to the propriety of selling the testator's interest in the partnership property.

As compared with the corresponding period of last year, the returns of the trade of the South Wales ports for the last month are less favourable than those of earlier months in the year. The export of coal was as follows:—Cardiff, 160,544 tons, as compared with 150,005 tons in June, 1869; Swansea, 47,222 tons, against 47,730 tons; Newport, 28,476 tons, against 24,132 tons; Llanelly, 11,048 tons, against 13,543 tons. The shipments coastwise were:—Cardiff, 82,395 tons, against 87,965 tons in June, 1869; Swansea, 18,566 tons, against 26,939 tons; Newport, 69,576 tons, against 70,403 tons; and Llanelly, 16,397 tons, against 17,165 tons. Cardiff exported also 25,416 tons of iron, and 4911 tons patent fuel; Swansea, 576 tons of iron, and 9949 tons patent fuel; Newport, 16,568 tons iron; and Llanelly, 81 tons of iron.

The arrivals at Swansea include—The Brennus, from Bilbao, with 150 tons of iron ore, for W. H. Thomas and Co.; Marie Therese, from Bilbao, with 115 tons of iron ore, for W. H. Thomas and Co.; Glanranald, from Huelva, with 525 tons of sulphur ore, to order; Witche of the Seas, from Carlfort, with 500 tons of zinc ore, for H. Bath and Son; Victory, from Bilbao, with 120 tons of iron ore, for T. Wood and Co.; Heroine, from Bilbao, with 149 tons of iron ore, for T. Wood and Co.; St. Pierre, from Carlfort, with 285 tons of zinc ore, for Richards and Power; Delphi, from Huelva, with 495 tons of sulphur ore, for H. Bath and Son; Serena, from Talat, with 750 tons of copper regulus, for Richards and Power; Grey Ogilby, from Huelva, with 370 tons of sulphur ore, for H. Bath and Son; Professor, from Carlfort, with 425 tons of copper regulus, silver ore, &c., for H. Bath and Son; San Carlos, from Carlfort, with 670 tons of copper regulus, for Elford, Williams and Co.; Harriet, from Bilbao, with 200 tons of iron ore, for James Strick.

REPORT FROM SCOTLAND.

July 13.—The hopes of speculators in Scotch Pig-Iron are not likely soon to be realised, as the "bears" have somewhat skilfully paddled their canoe under cover, and as several of the English holders are rather heavy-handed they are not likely to escape scatheless. The course of the market was weighted by Spanish politics to an appreciable extent, but the depression of prices became more apparent when it became known that "bears" had all but covered their contracts by purchases, which were stored against warrants for forward delivery. This depression has been going on for the last few days, and if holders are hurriedly pressed into becoming sellers prices may recede 5s. or 6s. from the best of last month. On Monday, in these circumstances, the market was flat, and declined to 57s. 3d. cash. Yesterday it was 11d. per ton more in the forenoon, but closed up to 57s. 3d. cash and 57s. 6d. a month, and unsteady. To-day the market was unsteady, prices in the former being 57s. 3d. to 57s. 9d. cash; on peace being announced between France and Prussia the market became excited, and quotations rose to 58s. 2d. to 58s. 4d. cash paid, closing with sellers 58s. 2d. cash, 58s. 6d. a month. No. 1, g.m.b., 58s.; No. 3, 56s. 6d. to 57s. Coltness, 67s.; Gartsherrie, 66s.; Langloan, 62s.; Calder, 61s.; Eglington, 58s.; Shotts, 60s.; Summerlee, 63s.; Glengarnock, 61s. 6d. The prices in this market are likely to recede rather than advance, owing to the falling off in the shipments, the thwarting of speculators, and the restoration of the *statu quo* on the Continent. The shipments of Scotch pig-iron from the whole of the ports were returned at 9330 tons, against 12,400 tons in the corresponding week of 1869, which is a falling off at a time when an increase was expected. The pig-iron market will be shut from Thursday till Tuesday next for the Fair holidays. Makers of Finished Iron have a sufficiency of orders on hand to

keep them fully employed, with some pressure for small quantities of various iron for shipment. Prices are held as last quoted, or as near the list price as buyers will give. Corrugated plates for shipment and hollow ware are in demand. Founders easier, but the copper workers are well engaged.

Coals of the ordinary shipping descriptions are enquired for, as well as steam coals for coasting and ocean steamers, at late quotations. House coals neglected, but prices maintained, though weak. During the week the shipments from the Scotch ports amounted to 29,265 tons, against 26,105 tons in the corresponding week of last year, showing a strictly improved consumption. The colliers have been roused to clamour for higher wages; and during the week those of East and Mid Lothian have been urged by Mr. McDonald, and Mr. Brown, of Leeds, to make an effort to compel a wage of 5s. a day from their employers. In Fifeshire the eight-hours system has become pretty general there, but the masters are expressing dissatisfaction with the limited output—wages, 3s. 6d. to 4s. a day. In Motherwell, Merry and Cunningham, and one or two firms more, have given an advance to their colliers, which has brought up their pay to 5s. a day; but other employers wished to postpone the advance to the 1st proximo, and for this the men withdrew their "grait," the masters came to terms before evening, and the strike is now at an end. The inspectors may well complain of the evils arising from itinerant delegates cramming miners with imaginary evils, instead of impressing on their minds the strict observance of all laws, both moral and legal. This is the bane of the miner, who otherwise would be contented and happy.

Mr. R. Moore's Report on the Mines and Collieries in the Eastern District of Scotland, for the year ending December, 1869, shows that the quantity of coal raised in the district was 8,500,000 tons, and the number of men employed 28,000. It would appear that fewer men have been employed than during the preceding year, not so much on account of increased emigration as by the depression in trade, and the increased number required by the shale works.

Throughout the year the men worked quietly, and during an extraordinary depression of the coal trade made fair wages. I have received from coalmasters details of the wages made by colliers in various localities of the district:—

In Lanarkshire, in the Wishaw and Hamilton districts, in a seam 5 ft. thick, rooms 12 ft. wide, stoops 20 yards square, a man during the year worked 259 days, and "hewed and filled" 725 tons coal and dress for £72 6 6
In the same district, under similar circumstances, another man worked 252 tons in 251 days for £37 16 6
Another, 667 tons in 247 days for £43 8 3
In Airdrie, seam of coal 4 ft., rooms 12 ft. stoops 12 yards, a man (52 years of age) in 249 days worked 850 tons for £51 3 10
In Fifo, in a seam 4 ft. thick, worked by the long wall method, a collier worked 253 days, and hewed and filled 786 tons for £46 19 2
In Midlothian, seam of coal 3 ft., long wall, a man worked 243 days, and hewed and filled 515 17-20 tons of coal for £51 10 4

The earnings of a boy from 12 to 14 years of age, when working with his father, will be about one-half, and from 14 to 16, three-fourths of the sum. Fifty-five fatal accidents were reported to me. They were fatal to 55 persons, being 15 more than the previous year. The excess was in falls of roof and coal, and in miscellaneous accidents.

There is a progressive improvement in the ventilation of collieries in this district, more particularly about Hamilton and Wishaw, where the extensive application of the Newcastle system of leaving large pillars requires more air. Larger ventilating furnaces and air-ways are now to be found, and the underground managers and overmen (who are better paid than they used to be) are becoming more alive to the importance of large air-ways and good stoppings, and also to the principles of ventilation.

One hundred and forty accidents from falls of roof and coal were reported to me; 29 of these were fatal to 30 persons. This leads me again to repeat the suggestion that deaths from falls of roof and coal would be fewer if experienced men were employed to visit the men's places at intervals during each shift, to set props, or at least to see that sufficient props were put up to the roof and coal. I have no hope that a rule of this kind will be adopted by all without legislative enactment. I would add slightly, in many cases, to the cost of producing coals, but it would diminish loss of life.

On Wednesday a terrible explosion of fire-damp occurred at Messrs. Colin Dunlop and Co.'s No. 7 pit, at North Carscallan, Quarter. The pit is 74 fms. deep, and owing to a trouble a new mine was being driven to strike the seam on the rise; it was considered free from damp, the men although provided with Davy lamps usually working with naked lights. An explosion occurred, while five men were in the pit, tearing down the brattice work, and part of the side linings, to the height of 40 fms. John Watson had left the stone mine to signal to surface at the moment of the explosion, and was, no doubt, instantly killed. The pit-head man is also supposed to have been tumbled over into the shaft, and shared the same fate, as he is missing. The other four men at work in the pit were rescued. No explanation can be hazarded as to the cause of the explosion; but in the stone mine a blind pit was being sunk to the lower workings, and a blast had been fired a short time before the accident. Some of those present at the scene suggest the probability of a "blower" of gas having been suddenly opened; but this, of course, is mere surmise, and no certain knowledge can be acquired until the workings have been explored.

Since last week we may notice that there has been launched here another splendid steam-ship for the Cunard Company, named the Algeria, of 3500 tons, with accommodation for 1000 passengers. Also, another new ship for the Pacific Steam Navigation Company of Liverpool, named the Valdivia, for the South American coasting trade. She is of 1975 tons, with inverted engines, of 300-horse power nominal, but capable of indicating 1500-horse power. The Valdivia is chiefly intended for cargo, but has superior accommodation for passengers on the main and awning decks.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

July 14.—The Quarterly Meetings of the Iron Trade have been held, to-day at Birmingham and yesterday at Wolverhampton. The general tone of the meetings has been healthy, and even the cloud which threatens rupture between France, Prussia, and Spain cast over the general commercial horizon does not seriously damage the prospects of the iron trade, to which war gives a special, though no doubt a temporary, stimulus.

There is a steady demand for iron, and prices are rather firmer, though the proportion of Staffordshire iron selling below trade rates is very considerable. Pig-iron is firm, and best all-mine hot-blast South Staffordshire brands are at 75s. to 77s. 6d., whilst hematites are 80s. The reports from various quarters tend to show that the demand is likely to be good for the rest of the summer. It is impossible to look forward with confidence any further.

The trade, however, just as it is acquiring a little firmness of tone, has to encounter an agitation for an advance of wages. In both districts the men have held meetings, and are demanding an advance of 1s. per ton for puddling, and a general rise of 10 per cent. for other branches. It may be remembered that last November prices were raised, and also wages, and the result was that there was a speedy falling off in the orders. The ironmasters could not obtain the higher rates, and could not afford to take contracts so low as before, and the result, which was acknowledged on all hands, was the men got less wages than they would probably have done had no change been made; or, at any rate, had the change been of half the amount. Prices are now rising to the standard then adopted, and a demand comes for a further advance, and the general opinion is that to grant this would be to at once turn away the current which is raising the trade from depression. As yet the men have confined themselves to resolutions, and to an application to the masters, and have not decided to give notice. It would be an immense advantage if an understanding could be come to by which wages could be regulated for a year, so as to avoid the frequent contests which occur at every change in the state of the trade.

Everyone has learnt the harrowing details of the terrible accident at Messrs. Stanier and Co.'s colliery, at Talke, which was briefly noticed in the *Mining Journal* last week. Talke seems to be a perfect slaughter-house for colliers. The enquiry has been adjourned, but in such a case—or rather, after so long a series of terrible explosions—it would seem to be the duty of the Government to institute a special enquiry, to ascertain the nature and the extent of the special liability to emissions of explosive gas, and to lay down special requirements for the working of mines, where so peculiar a degree of danger is involved. It is worthy of note that the enquiries have shown that, so far as the expenditure by the proprietors goes, every known precaution is taken, but it is difficult to secure perfect discipline, and a single careless man may render all precautions vain where gas exists in the workings. We shall hope to know more shortly of this terrible accident; but could not the local mine agents and the Government Inspector meet, and consider whether any additional means can be adopted for the future for avoiding the repetition of these terrible accidents? Mr. Lucas, the ground bailiff, in his endeavours to save any who might be left alive, showed great courage and endurance, and was admirably seconded. It is painful to know that the men at this colliery, shortly before the accident, had declined overtures made to them, to join the association founded with the balance of

the Talke Fund as a nucleus, so as to provide for aid in sickness, and for their widows and orphans, in case of their own deaths by accident.—[At the close of the evidence the coroner summed up, and the jury, after consulting for half-an-hour, found that the deceased were killed by an explosion of gas, but how the explosion was caused there was no evidence to show. They considered, however, the return airway was too small for the extent of the workings, and recommended that it should be enlarged.]

In addition to the flooding of mines in the Tunstall and Burslem portion of the North Staffordshire district on Thursday last, the colliery of Messrs. Hawley and Bridgwood, at Longton, on the opposite side of the coal field, was inundated. This has arisen from a fault, which protected the colliery from ponds of water in the mines on the north of it, having given way. The damage threatens to be very serious.

AN UNFENCED PIT SHAFT—£10 FINE.—At the Sedgley Police Court, John Turton, of Wombourne, was charged with neglecting to fence a pit shaft at the Dunkirk Colliery, West Bromwich. The complainant was Mr. J. P. Baker, Government Mine Inspector, for whom Mr. T. Walker, of Wolverhampton, appeared.—Mr. Turton, who was charged as owner, at the commencement denied owning the colliery, but subsequently admitted that he was the agent for the proprietors. Mr. Spooner said that according to the terms of the Act an agent was liable for such an offence as that charged.—Edward Smith of Greet's Green, called to the effect that the pit shaft referred to unfenced on March 6, when there were several children looking down the pit. It was only protected by some brickwork, one row higher than the level of the ground around it. On the 29th of the same month witness in company with Mr. Baker, the Inspector, visited the pit again, and found it in a similar condition to that described. In about four or five days afterwards it was arched over and made safe.—In defence Mr. Turton said he immediately attended to the defect on the receipt of the Inspector's notice, and that the shaft was 200 yards from any public road.—Mr. Spooner inflicted a fine of 10l., remarking that it would have been 20l. but for his prompt attention to the Inspector's notice.

THE SOUTH MIDLAND INSTITUTE OF ENGINEERS.—The usual monthly meeting of members was held in Wolverhampton, on Monday, Mr. H. BECKETT, F.R.S., ex-president of the Association, occupied the chair, and there were also present, amongst others, Mr. S. Bowkley, Mr. Rose, Mr. Walter Ness, Mr. Baker (of Bloxwich), and Mr. W. Underwood. The following persons were elected members of the society:—Capt. E. Groucutt, Tettenhall-road; C. Smith, Tettenhall-road; Wm. Harwick, Chapel Ash, all of Wolverhampton; and T. Millership, of Nailston; Edward Sayer, of Wyrley; and Knocb Hudson, of Essington, Bloxwich.—The CHAIRMAN said that he regretted the absence of the President (Mr. Baker, her Majesty's Inspector of Mines), who was engaged out of the town. At the next meeting Mr. Baker intended to read to the society a continuation of his former paper.

The Council presented a report, in which they congratulated the members on the large accession of members and the general prosperity of the Institute. As the association was not now a novelty, the increase in the numbers was no doubt due to the interest taken in the working of the society. During the last six months the increase in the number of members had been 49. The meeting considered, and ultimately adopted, several alterations in the rules, which the Council of the society had suggested.

The HON. SECRETARY (Mr. J. Cope) reported that the committee of the society had seen Mr. Stokes, of Saredon, on the subject of borings which had been taken there. He seemed disinclined to give the committee much information, and thought that if he gave them the section of the borings he ought to be paid 20l. for it. The committee thought that this sum was a great deal too large, for, as they were all aware, the Saredon borings were made at a time when borings were very uncertain, and the section after all gave the Institute no assistance. The committee, however, thought that 2l. might be given to Mr. Stokes for the section.—In a short discussion which followed, the members said that they considered that as Mr. Stokes wanted as much as 20l., the matter had better end; and the Chairman added that a member of the society had the borings, so that the committee need not trouble anyone else for them.

Mr. COPE said, that after visiting Saredon, the committee went to Wyrley, to a spot where Mr. Hawkins is boring through coal. Up to the present time, the borings were down 33 yards 1 foot in one place, 21 yards in another, and 40 yards in a third place. Mr. Hawkins told the committee that as soon as he got through the coal, he would give the Institute any information, or a section, which they might think useful.—The CHAIRMAN said that the Institute had not yet decided upon a spot for a trial. He thought it was desirable that the Institute should visit Patchull Park, the seat of the Earl of Dartmouth, and see if there was any probability of finding coal there. He (the Chairman) had spoken to Lord Dartmouth upon the subject. His lordship approved the ideas of the Institute, and said that he should be happy to assist them.—Several members agreed with the Chairman upon the desirability of trying Patchull; but it was ultimately arranged that the matter should remain in abeyance until Lord Dartmouth returned to his seat.—Mr. BAKER thought that the Institute should examine ground at Elford, near Lichfield. He had no doubt that there was quite a large coal field there; and a few days ago he met a gentleman who expressed himself ready to assist the society in making a trial, if other persons would do the same.

TRADE OF THE TYNE AND WEAR.

July 14.—There has been a most seasonable arrival of vessels in these ports lately, both coasters and foreign, many of them of large tonnage. The exports of coal and iron have consequently been on a large scale, and the Coal Trade, both coastwise and foreign, on the whole good; the demand for steam and other coal for export is indeed very brisk. On the whole, the works have been well kept going lately, and the prospect is improving. A commencement has been made at Hebburn in getting coal, and rapid progress is expected now. At Denton Colliery, four miles west of Newcastle, considerable progress has been made in opening out the old colliery, which is understood to contain a good quantity of coal in at least two seams.

As we mentioned a few weeks ago, the miners at Burradon Colliery gave notice to the masters that they would require 2d. per ton advance on the prices then paid. This notice, which was for one month, expired on Friday last, and some fears were entertained that a strike might take place; this was, however, most happily averted, as first the men and the viewer, Mr. Ramsay, had a conference, when an understanding was come to, subject to the approval of Mr. Bower, the owner of the colliery. Subsequently, a meeting took place between the workmen and Mr. Bower, and a compromise was effected on similar terms to those made at the meeting with Mr. Ramsay. In the worst parts of the Yard seam, the same seam which caused so much mischief at Backworth only a short time ago, it was agreed that an advance of 2d. per ton be paid, and in other parts an advance of 1d. per ton was agreed upon.

Extensive iron works were commenced near Sunderland, some time ago, on the Hylton estate, and they are now being pushed forward with the utmost vigour. In addition to smelting-furnaces, it is intended to establish, in the first instance, machinery for the rolling of ship-plates of all kinds; and the largest sizes, but sufficient ground has been secured to enable the firm at a future time to add also rolling-mills for making bar-iron and railway iron also. The eminent Wear shipbuilder, Mr. T. R. Oswald, is at the head of the firm, and besides the manufacture of ship-plates, it is evident that the establishment of those works will give a great impetus to iron shipbuilding in the Wear, as new works contiguous to the site of the iron works are at once to be established for this purpose. The iron ore is to be brought from Cleveland in screw-steamers, and delivered direct into the works, so that, as at Jarrow, which appears to be the model followed in laying out the new works, the raw ore will be put into the works at one end, and at the opposite end ship-plates and other finished articles will be turned out.

REPORTS OF THE GOVERNMENT INSPECTORS.—The report of the Government Inspector (Mr. Southern) for North Durham, Northumberland, and Cumberland, shows that the number of fatal accidents were, in 1867, 72, and in 1868, 67, being an increase of five, and the total number of deaths resulting from these accidents were, in 1867, 80, and in 1868, 69, showing an increase of 11. It is remarkable that only two explosions of gas are recorded as having occurred in this large district, which must be taken as a favourable state of things, so far as this much-dreaded class of accidents is concerned, and six lives were lost from this cause, being an increase of three under this head. The greatest number of accidents, as a very slight inspection of the tables show, are under the head of "Falls of stone and coal, shaft accidents, and accidents with trams and tubs underground." As Mr. Atkinson, the Inspector for South Durham, truly remarks, it is matter for congratulation that such a point has been reached, so far as explosions of gas are concerned, and there is little doubt that very strict care on the part of deputies and others in mines, and on the part of the miners themselves, would materially tend to reduce the number of accidents occurring from falls of coal and stone, and particularly the latter. It must not be supposed for a moment that the accidents arising from falls of stone are incapable of prevention. No doubt there is great difficulty in many cases in forming an accurate estimate of the soundness of the roof from an examination, but a liberal use of timber in all doubtful cases would have the direct effect of reducing the number of fatalities. One case is particularly noticed in the report of Mr. Southern, where the man in charge evidently doubted the safety of the roof, yet he set the men to work, and merely cautioned them and enjoined carefulness; and afterwards, when some of the roof had fallen, and the man's attention was called to this, he did not withdraw the men, and subsequently a

fall took place, which killed two of the men. With respect to accidents in shafts, the case is not so clear; it is remarkable that there is not a single accident from over-winding, which speaks strongly for the machinery used, and the skill and attention of the men employed. The greatest number of accidents in shafts appear to occur from the men being caught by spears or other things while ascending or descending, and one reason that may be given for this is, perhaps, the open kind of cage used. It is well worthy of consideration whether, if the cages used were more closed at the sides, some of these accidents might not be prevented; at any rate, little additional cost would be necessary to effect this. The loss of life from crushes from trams and tubs underground is serious, and a great deal, it is obvious, depends upon the care of the workmen employed themselves in order that accidents of this kind shall be prevented.

THE IRON AND COAL TRADES AT MARYPORT.—The coal trade at and around Maryport is extremely good, and has been so for some time. Most of the coals sent from here are shipped to Ireland, and the demand has been very good for a long period; but the establishment of iron works has also contributed much to the increased prosperity of the coal and coke trades. Two companies have commenced operations on the limited liability principle; one of them has two furnaces in blast, and two more in course of construction. The other company have two large furnaces, and are now erecting engines, &c. Rolling-mills are also in course of construction—indeed, are nearly completed. The situation for the profitable working of iron furnaces and rolling-mills is most excellent, as abundance of cheap coal and coke is to be had on the spot, and the great iron ore district of Whitehaven is within easy distance by rail, while the means of transit from the works for the finished article is good, either by sea or land. A large Liverpool steamer is now loading in the dock at Maryport pig-iron, the produce of the first-mentioned completed furnaces. At Aspatia the trustees of the late Capt. Harris are working a large quantity of coal from the old colliery, and they are also busily engaged in completing a new winning a little further eastward to the Aspatia seam. Two excellent shafts have been sunk and finished in the best manner, being lined throughout with fire-brick quarls. An excellent pumping-engine has been erected, also a good winding-engine, and every arrangement made on the most modern principles for the output of a large quantity of coal. The same firm also work the Ellenborough Colliery, near Maryport, and a considerable quantity of coal is raised here, and an excellent trade has been experienced during the present year.

DEATH OF MR. ATKINSON.—It is with much regret that we record the death, from apoplexy, of Mr. JOHN JOB ATKINSON, the Government Inspector of Mines for the South Durham district, which occurred on Wednesday morning. Mr. Atkinson was a native of South Durham, and served his apprenticeship as a viewer at the Hetton Collieries, and had considerable professional experience subsequently in South Wales and Durham. During the past 15 years he has occupied his official position to the satisfaction of all parties. He was not only a thoroughly practical man, but possessed considerable skill in mathematics, in engineering, and in science generally, and was an acknowledged authority upon all matters specially connected with the working and ventilation of collieries. His contributions to the Transactions of the North of England Institute of Mining Engineers, his paper on the "Theory of Coal Mine Ventilation," which assumed the proportions of a short treatise on mine ventilation, not only having attracted much attention at the time, and formed the subject of many important discussions, but being still held as a standard work of reference on this very intricate and important subject. His papers "On Mechanical Ventilation," and other subjects, were highly appreciated, and he continually gave his fellow-members of the Institute the advantage of his extensive knowledge of the various systems of coal mining practised at home, in Belgium, and in other countries. Mr. Atkinson was 50 years of age, and leaves a widow and 19 young children to mourn their loss. For ourselves we have lost an obliging and communicative friend, who was ever ready to furnish valuable information.

REPORT FROM THE NORTH OF ENGLAND.

Middlesbrough, July 14.—Tuesday's market was an average one so far as attendance was concerned, and an average also of late gatherings in point of business done. Enquiry for pig-iron was good, and the firm and advanced prices of last week were repeated—viz., for No. 1, 56s. 6d.; No. 3, 53s. 6d.; No. 4, 52s. 6d.; nett cash. The Franco-Spanish question was freely discussed, and the difficulty that has arisen on the Continent may be said in some degree to have already slightly affected the iron trade. Glasgow prices have given way, but the Cleveland rates show as yet no signs of decline. Since our last letter the Cleveland Ironmasters' Association return has been issued for June, by which we observe that the make of the district during June was 136,333 tons, being an increase of 16,019 tons upon the same month of 1869, and a decrease upon May this year of 5496 tons. The stocks of pig iron in makers' hands were on the 30th of last month 64,889 tons against 68,014 tons on the 31st of May—a decrease during the month of 3125 tons. The decrease in warrants was 1800 tons; since the return was issued this stock has gone down 500 tons further, and now stands at 15,539 tons. Rail, plate, and bar iron trades are steady, and considerable activity is to be witnessed throughout the entire neighbourhood. A new works for the manufacture of puddled bars is to be started with at once on land at Eston, near Middlesbrough, and Mr. Richard Jackson, on whose land the works will be erected, is to be a leading partner, the managing partner being a gentleman connected with the iron trade in Staffordshire, Mr. T. Gill.

A strike of engine-builders at Stockton has attracted a good deal of attention this week. Messrs. Blair and Co., of that town, are very busy, and much pressed for the due execution of the orders they have on hand. Their employees have, consequently, been working overtime to a considerable extent, and under the recent system, it was stated, no workman was allowed to reckon overtime until he had worked 118 hours a fortnight, no matter for what reason he might be absent, or how many nights he might have worked, and then for time beyond the 118 hours he was only paid after the rate of time and a quarter. This the men objected to, and at a meeting, held by them a fortnight ago, resolved that they would not work any longer under that system; that overtime should be reckoned every day after six o'clock in the evening, even if a man lost the first quarter, if he was requested to work overtime, and the men working all night be paid as for 15 hours, with an allowance of an hour and a half for meals. A deputation was sent to wait upon the senior partner of the firm to communicate this decision to him, and to inform him at the same time that if this request was not conceded they should refuse to work any more overtime. Mr. Blair agreed to pay 15 hours for all night-work, on the understanding that the first quarter of the day was not lost. The majority of the men, who were dissatisfied with the result of the deputation's interview, and after a second meeting between the firm and the men's representatives matters could not be amicably arranged, and on Monday morning 850 men refused to start work. Further consultations took place at night, and eight o'clock on Tuesday (yesterday) morning the generality of the men resumed work. It is reported that above 100 of the men on presenting themselves for work received their discharge.

The erections in connection with the new iron works on the Hylton Castle estate, close to the River Wear, are progressing rapidly. They are being built by Messrs. Oswald and Co., of Sunderland, shipbuilders, and are being constructed principally for the manufacture of iron for shipbuilding purposes. The furnaces are to be fed, it appears, with ironstone from the Cleveland district, which will be taken round from the Tees to the Wear by steamers.

The second new furnace of the Stockton Blast Furnace Company has been blown in, making the total now in blast in the Cleveland district, 109. The Sunday fettering question came before the Quarterly Meeting of the Board of Arbitration, held at Newcastle, on Monday, and it was decided to ask Mr. Hughes, the arbitrator, whether or not men who entered into the wages contract at the beginning of the year are honourably bound to work on Mondays.

MR. C. E. MULLER, iron merchant (Middlesbrough, July 12), writes—Since my last report the market for Cleveland pig-iron has remained very steady; a fair amount of business has transpired, chiefly for delivery forward. Although the first rush of the shipping season is now over, iron for present delivery continues very scarce, and is still quoted as follows:—No. 1, 56s. 6d.; No. 3, 53s.; No. 4, 52s.; L.O.B. In the Tees. There are now 110 furnaces in blast, against 168 this time last month. Messrs. Lloyd and Co. having blown in two new ones of the largest class. The following are the usual returns for June, compared with same month last year:—

	Production.	Coastwise.	F. reign.	Warrant Stocks.
June 30, 1870	136,333	18,947	24,097	54,672
June 30, 1869	120,314	11,286	17,555	16,039

Increase 16,019 7,661 6,542 Decrease 38,633
Makers' stocks are down to 64,889 tons, being a reduction of 3125 tons since May. Reduction in store for the month, 1800 tons. Total, 4925 tons. The iron of Cleveland makes rapid progress on the Continent, as shown by the following comparison of foreign shipments during first halves of the last three years:—January till end of June, 1868, 63,993 tons; January till end of June, 1869, 60,181 tons; Jan. till end of June, 1870, 131,695 tons. After abolishing the Rhine Navigation Dues, Prussia carried in the Zollverein Parliament the reduction of the Customs duty on iron, and has now succeeded in removing also the Elbe Navigation Dues. This will facilitate the carriage of goods to a very great extent on this most important of the German rivers. The reductions in transit will amount to from 10 to 20 per cent., according to the article and destination. An article like iron will, of course, profit most by it. The reduction on rails

and pig-iron for the interior will amount to about 2s. 9d. per ton. If to this is added the reduction of 5s. per ton import duty, which comes into force on Oct. 1, the prospects of a good trade in iron with Germany and Austria are certainly encouraging, and no district will benefit by it more than that of Cleveland.

PUDDLING IRON BY MACHINERY.—By the following report of the discussion on Mr. Lester's paper "On Puddling," at the meeting of the Cleveland Foremen's Association, our readers will learn with interest that a puddling-machine has been invented by Mr. Thomas, of the Acklam Refinery, a gentleman who has previously given the world singular proofs of his fertile inventive genius. Everybody connected with the iron trade, from ironmasters to ironworkers, is interested in the great question, Can a machine be made to puddle iron? Wonderful as have been the triumphs of chemistry and engineering in the manufacture of self-acting tools during the last half-century, nothing has been done to ease the over-taxed puddler. The process of puddling, the great first stage in the manufacture of wrought-iron, is exactly the same as it was 50 years ago; indeed, an expert puddler, Mr. Williams, is quoted as stating that puddling as a branch of the iron manufacture has not deteriorated during the last generation. True, machinery has been invented to assist in puddling the metal in the present furnaces, which has had the effect of materially lessening the labour of the under-hand, but the puddler has still to ball the iron in front of the fiery furnace, exhausting his strength, and, without doubt, shortening his life. Is there no help for this state of things? Does the mechanical genius of the country give birth to James Watt and George Stephenson slumber? No, that genius was never more active, never more on the alert, than it is to-day. All that is required to ensure the perfecting of a puddling machine is the means for the concentration of the latent inventive talent around us, and success will surely follow.

The invention of the Bessemer process was a great stride in the manufacture of steel and steely iron. In the Bessemer process there is no lamination—it is solid homogeneous iron. So ought all iron to be made; and no puddling machine will be perfect unless its parts can be kept in thorough working order, and until it is easy of setting and capable of thoroughly puddling a ball of any size required. It should also be competent to make the iron hard or soft, in order to suit the purpose for which it is intended, at the same time keeping it free from lamination. As journalists, we can but bring these inventions into prominence, and report progress, in the hope that practical men will be stimulated to wrest from Science her priceless secrets. All of us are vitally interested in making good iron. Our property and our lives are every day dependent on its quality, both on sea and on land. As we have stated, Mr. Thomas is prepared to make a machine that will puddle iron infinitely better than can be done by the hand labour, with a saving of about 10s. per ton. For obvious reasons, we at present withhold a description of this machine; but we understand that Mr. Thomas is willing to communicate with any responsible gentleman connected with the iron trade, with a view of bringing out the invention. Surely the ironmasters will not be dilatory in considering such a proposal. We think they are morally bound to lend all the assistance their capital and plant can furnish in giving a fair trial to an invention which promises such great results. Mr. Thomas believes his project to be the first brought before the public that will give the Bessemer rail, ship and boiler plates have never before been made entirely free from lamination, and this desideratum Mr. Thomas is confident of accomplishing by his machine. The enormous revolution in the iron trade which would be effected by the introduction of a puddling machine must be patent to all who have any knowledge, however superficial, of the manufacture of iron; and we trust before long to be able to announce that a scheme is on foot to practically test Mr. Thomas's invention.

DISCUSSION ON MR. LESTER'S PAPER ON PUDDLING.—The ordinary monthly meeting of the Cleveland Iron Trade Foremen's Association was held on Saturday evening, the 10th inst., in the chair, Mr. Lester. The discussion upon the paper on Puddling, read at the last meeting by Mr. Richard Lester (published in the Supplement to the Mining Journal, of June 4), was resumed by Mr. Thomas, of the Acklam Refinery. He hoped the members had committed to memory the simple rules laid down by Mr. Lester, which were the basis of the science of puddling. He had shown that by careful attention to the science of manufacture iron of great excellence might be made from inferior pig metal; but to attain that excellence extra labour was necessary, which could be obtained from the puddler, and would thus involve as sulphurated iron work it has to perform. It was often merely a mass of lamination, the effects of which might be seen in their rails and plates—splitting, slipping, weakening, and deranging the fabric they were meant to sustain. Having studied the question, he would engage, with proper assistance, to make a machine that should perfectly puddle 8 cwt. of metal into one ball within 35 minutes, which ball might be shingled, re-heated, and rolled off into a single rail or plate. He would also engage that the iron should be infinitely superior to that made by the system now in use, and at a less cost of at least 1s. per ton. The only labour required from the puddler would then be the feeding, taking out the ball, and regulating the machine, and his work would thus be as easy as that of an engineer at a self-acting lathe. The difficulty was in carrying out such an experiment to get proper assistance, and it could only be obtained in works where the shingling hammer and the rolls to roll off were at hand. After a few remarks from the Chairman, the discussion was adjourned until next meeting.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

July 14.—The iron works in Derbyshire were never more active than at present, rails and railway plant never having been in better request, and we hear of new furnaces being about to be commenced. At no time has there been so much doing in the production of pig-iron, whilst the demand for ordinary castings has been very good. A moderate business is being done in House Coal, but the demand for Steam Coal continues good. In Sheffield a good trade is being done in the heavy trades, more especially in large castings and in the production of Bessemer steel. Unfortunately, coalowners are placed in a very difficult position, owing to the agreement between the Midland and Great Northern Railway Companies, by which the latter has no power of reducing its rates to London and the South.

THE SOUTH YORKSHIRE STEAM COALOWNERS' ASSOCIATION.—On Tuesday a meeting of the members of this association, which was only very recently established, was held at the King's Head Hotel, Barnsley, the chair being occupied by Mr. Crofts, of Pinder Oaks. The collieries which now comprise the association were stated to be those of the Wombwell Main Coal Company, the Lund Hill Coal Company, Mr. W. Way's Main Oxborne Colliery, Mr. T. Dymond's the Oaks, the Darfield Main Coal Company, Mr. Crofts's East Gawber, Messrs. Wilcock and Lawton Blacker Main, the Denaby Main Company, and the Aldwarke Main Company. Mr. Crofts stated what had been done since the previous meeting, and described the present state and the prospects of the association. Arrangements had been made by which the largest vessels could be supplied with the well-known Barnsley Hard coal direct from any of the collieries of the members of the association. As yet no large amount of business had been done; but as the coal was well known in Hull and Grimsby, and was on the lists of the English, French, and Indian Governments, the advantages offered by the association of treating direct with purchasers it was felt would be appreciated when the usual time for entering into contracts had arrived. By doing away with the intermediate profit of the broker and merchant, generally much larger than that of the coalowner, Hull and Grimsby would be able to compete with Newcastle and the Welsh ports. The quality of the coal would also be guaranteed, as there would be no mixing of that of one district with another, or an inferior with a better quality, as has been the case in very many instances. It was stated that offices had been taken at Hull, and a gentleman well acquainted with the shipping trade had been appointed the agent for the association, and that all the necessary machinery for doing an extensive business had been completed. At the termination of the meeting the members dined, Mr. Crofts occupying the chair.

LEAD MINING IN SHROPSHIRE.

THE EAST TANKERVILLE MINE.

From the earliest ages the British Isles have been justly celebrated for the extent and value of their mineral deposits, and their fame has been recorded by more than one eminent writer of antiquity. The origin of the discovery of their hidden treasures lies veiled in the obscurity of forgotten ages, for though the finding of the distant lands called by them the Cassiterides, or I-lands of Tin, is generally accredited to the ancient Phœnicians, it appears hardly probable that even those hardy mariners should have left their world-famed city of Tyre to sail such a lengthy and perilous voyage had they not been guided more by some foreknowledge of the probable result of their bold adventure than by mere chance or accident.

Following the Phœnicians came the Romans, who, pre-eminently a nation of soldiers, did not, perhaps, value so highly as their predecessors the mineral wealth of the kingdom they sought to conquer, but without doubt entertained no mean opinion of the advantages to be derived from the possession of those lead mines for the defence of

which the old Silures fought with such indomitable courage and determination. Abundant evidence shows that during their occupation of these islands the Romans actively developed the resources of many of the most remarkable lead mines of Wales and Shropshire, which from their time to the present day have been more or less intimately connected with the history, both political and commercial, of the United Kingdom.

The industry of mining has undoubtedly ever been one of the greatest sources of the national prosperity, and in proportion with its extension have our home manufactures multiplied, and our foreign commerce been widely disseminated. To the accomplishment of the results which have placed England foremost amongst the nations of the world it would be invidious to select one district as having contributed more particularly than others, but it is impossible not to notice, on taking into consideration its limited extent, how largely and with what unflinching regularity that portion of Shropshire in which the metallic deposits occur has yielded its share to the national income.

Lying on the western slope of the range of mountains known as the Stiperstones, this district, though but twelve miles in length, by six miles in width, contains many mines which have long been remarkable, not only for the richness of their produce, but likewise for the regularity with which the yield is maintained. Of these it will suffice to enumerate Snailbeach Mine, the Roman Gravel, the Bog and Pennerley Mines of the Stiperstones Company, and the Tankerville Mine. The extraordinary richness of the latter is so well known that it is needless to dilate on it here more than to remark that the ore course now being wrought is probably such an one as has never before been met with, and of the real value of which it is difficult, if not impossible, to form any correct estimate. For the length of the western boundary of Tankerville set, and immediately adjoining it, lies a valuable piece of virgin mineral ground, traversed by numerous well-known and productive lodes, amongst which is that containing the ore course above referred to.

Northward of this piece of ground, which is known as East Tankerville Mine, lies Snailbeach Mine, which has been worked uninterruptedly for upwards of 90 years, making during that long period steady returns and large profits; to the north-east, and adjoining it, is Perkins Beach Mine, in which operations have lately been resumed with most encouraging prospects of permanent success. To the south are the Bog and Pennerley Mines of the Stiperstones Mining Company (Limited), which are not only yielding satisfactorily, but increasing in richness; lastly, to the west, as has already been stated, lies Tankerville Mine.

East Tankerville set contains six well-known lodes, bearing nearly east and west, giving a total of about 2400 yards on the run of their courses, and, with one exception, underlying south; these lodes are traversed by several caunters, making within the boundaries of the set numerous junctions, so much desired by practical miners.

The Tankerville lode, which has lately been described by Captain Arthur Waters as "unquestionably one of the greatest, if not the greatest, lead-producing lode in Shropshire," and of which at a later date he writes "the only difficulty we have is to describe the value of the great ore course in words that shall be believed," traverses the southern portion of this set, carrying with it at surface every indication of maintaining its extraordinary productiveness, and, as it underlies north, will at no great depth form a junction with the Great Spar vein, where it is expected a great deposit of ore will be met with.

Of the other lodes in the set, that known as Cross, may be mentioned as having returned in former working of the adjoining Perkins Beach Mine more than 35,000Z. of lead ore.

The natural advantages of East Tankerville are of a decided character, and cannot be too highly estimated; it is approached by good roads, and the configuration of the ground is such as will admit of the property being proved at a minimum cost by means of deep adit levels, which can intersect all the lodes contained in the set, cutting the Tankerville vein at a depth of more than 600 ft.; thus the expense of sinking a shaft and erecting pumping machinery will be rendered unnecessary until the value of the mine has been fully established.

The adoption of share warrants to bearer by the proposed company is an excellent arrangement, which will afford their holders (who may be styled anonymous members of the company, in contradistinction to the registered members) every facility in the exercise of their rights of membership. All registered members will be entitled to convert any paid-up shares or stock into warrants, and any person being possessed of a warrant may, on surrendering it for cancellation, have his name registered as a member in the share register.

Of this property it may safely be asserted that seldom has an undertaking been initiated having such decided indications of early and permanent success as the East Tankerville Mine.

MINING IN MONTGOMERYSHIRE.

For many years past the general public have known very little of the rich mining capabilities of this district beyond the information afforded tourists in the guide books of the neighbourhood as to the large fortunes made by a few well-known individuals, who wisely worked their different properties privately, and without ostentation.

The rapid development of the Van Mine since it became the property of a joint-stock company has, however, brought the surrounding district into prominent notice, and several properties have thus changed hands, which might otherwise have remained comparatively undeveloped and unknown for years. Among the most prominent of the latter in the district is the mine situated at the top of the Pen-rhiw-mwyn Mountain, near the picturesque village of Llanbrynmar.

This property has been in the hands of a private gentleman for some years, who, beyond working it at the summit of the mountain, did very little to open out its capabilities. The proprietor has lately invited 20 gentlemen to subscribe 100Z. each, and a small joint-stock company has been formed, under the title of the "Fron-vellan Lead Mining Company (Limited)," to drive a long level at the base of the Pen-rhiw-mwyn Mountain, so intersecting at that depth the lodes which have been worked upon at the summit. When this is done, it will give "backs" in height equal to the depth of the Dyliffe Mine, and extending over a mile in length.

The three lodes in this property are well known in the neighbourhood as the champion lodes of the district, and are laid down on the Government Geological Map. In fact, it is said that the Romans worked these lodes to the depth of 15 to 20 fathoms. But this mine, like others begun by those enterprising explorers, could only be worked in their time below the surface to a certain extent, as they had no means of keeping the flow of water under control. They also laboured under another disadvantage—the want of gunpowder, which was partially obviated by making a fire against the rock, and then, when well heated, throwing cold water over it, thereby cracking the stone. It is curious to note that this practice is still carried on by explorers in remote parts of the world.

The run of these lodes, and their position, on the Pen-rhiw-mwyn Mountain, are most eligible for opening out a large mine, upon the most economical scale, there being also an abundance of water-power for all purposes. The company was registered on June 30 last, and the application for shares has far exceeded the limited number to allot; indeed, some have changed hands at a high premium.

Great interest is expressed in the neighbourhood, as it is the universal opinion that Rhiw-mwyn is now about to give up its long-hidden treasure, and enter into rivalry with its opulent neighbours—the Dyliffe, the Cae-Conroy, the Van, and a well-known group of other dividend-paying mines in its vicinity.

The TUOLUMNE GOLD MINING COMPANY have notified that the certificates are now ready for delivery in exchange for the bankers receipts.

HOLLOWAY'S PILLS AND OINTMENT.—HEAD, STOMACH.—A disordered stomach, sooner or later, induces headache, and all those painful, languid, disagreeable feelings too well known to the dyspeptic. The relief afforded in such cases by Holloway's pills is extraordinary, the most confirmed indigestion is easily remedied by friction externally with the ointment over all organs, and the internal use of the pills. These preparations may be used at all times and in all climates by persons affected with biliousness, nausea, or disorders of the liver; for flatulence and heartburn they are specific. Indeed, no ailment of the digestive organs can long resist their purifying and corrective powers, which are frequently acknowledged and fully appreciated in every part of the civilised world.

BRYMBO, WREXHAM.

SALE OF VALUABLE FREEHOLD FARM AND MINERALS THEREUNDER.

TO BE SOLD, BY AUCTION, pursuant to a Decree of the High Court of Chancery, made in a Cause of Forfeiture, in One Lot, by Mr. JOHN CHURTON (the person appointed by His Honor the Vice-Chancellor, Sir William Milbourne James), at the Wynnstay Arms Hotel, Wrexham, on Thursday, the 21st day of July, 1870, at One o'clock in the afternoon, subject to such conditions as shall be then produced.

ALL THAT VALUABLE FREEHOLD FARM,

Situate at GLANFARON, in the township of BRYMBO, near WREXHAM, in the county of DENBIGH, containing 30A. 2R. 32P. of LAND, of statute measure, or thereabouts, be the same more or less, now in the occupation of Mr. Edward Jones, with the COAL and other MINERALS in and under the same. The coal under the property has been proved, and consists of all the different seams worked in the immediately adjoining collieries of Broughton, Brymbo, Westminister, &c., &c., with any of which, or otherwise, they could be advantageously worked, and from the workings of such collieries intending purchasers will be enabled to form an estimate of the valuable quality of the coal under this estate.

Early possession may be had. Particulars, plans, and conditions of sale may be obtained from the Auctioneer, Chester and Whitechurch; or at the offices of Messrs. BURDER and DUNNING, solicitors, 27, Parliament-street, Westminster; Messrs. CHURCH, SOSS, and CLARKE, solicitors, 9, Bedford-row, London; Messrs. DUNCAN and CAYLEY, solicitors, Chester and Mold (where a section of the coal seams may also be seen); Messrs. JAMES and GRIFFIN, solicitors, Bennett's-hill, Birmingham, and at the office of Mr. EDWARD BLOXAM, Chief Clerk. Dated this 22nd day of June, 1870.

TO BE SOLD, BY PRIVATE CONTRACT, WITH IMMEDIATE POSSESSION, all those works known as the CASTLEFORD IRON WORKS,

Situate at CASTLEFORD, near LEEDS, comprising:—A SMELTING FURNACE; a BLOWING ENGINE, of 25 horse power, with BOILERS, &c., in perfect repair, with patent flues and hot air stove. Also, TWENTY COKE OVENS, the heat from which is conducted to the boiler; also a water lift, weighing machine, smiths' shop, offices, &c., and about four acres of freehold land, in which exist excellent beds of clay and sand.

The North-Eastern Railway, which adjoins on one side, and the Aire and Calder Navigation, which adjoins on the other side of the works, afford every facility for receiving material, and sending away the manufactured produce. A small foundry is attached to the works, which may be purchased at the same time.

A portion of the purchase money may, if required, remain on security of the premises.

If NOT SOLD, the WORKS WILL BE LET. For further particulars, apply to Mr. GEORGE GRAHAM, C.E., Low Beechburn Colliery, near Darlington; or to Messrs. NORTH and SONS, Solicitors, Leeds.

VALUABLE IRON ORE ROYALTY AT FRIZINGTON, NEAR WHITEHAVEN, TO BE LET.

TO BE LET, BY PROPOSAL, for a term of 21 years, with possession on the 1st day of June, 1871, the very extensive and valuable ROYALTY OF IRON ORE under the ancient enclosed lands of the estates called FRIZINGTON PARKS, situated in the township of Frizington, in the parish of Arlecdon, in the county of CUMBERLAND, comprising an area of 252 acres, or thereabouts, distant about six miles from Whitehaven, and adjoining the well-known and productive iron ore mines in the Parkside, Goosegreen, Eskait, and Ulinder E-ates.

The Frizington Parks Estate is intersected by the Whitehaven, Cleator, and Egremont Railway, by which the ore can be forwarded direct either to the north or south iron districts, or to Whitehaven Harbour.

The owners do not bind themselves to accept the highest or any bidder. Conditions of letting may be seen in London at the office of Messrs. GRAY, JOHNSTON, and MOORE, 5, Raymond-buildings, Gray's Inn; and in the country at the office of Messrs. BROCKBANK and HELDER, Solicitors, Whitehaven, who will receive proposals up to the 15th day of August, 1870.

COAL FIELD TO LET.

TO BE LET, FOR Nineteen Years, with entry at Lammas next, the COAL FIELD OF CLUNY, in the parishes of KINGLASSIE and AUCHTERDERHAN, and county of FIFE, with the COLLIERIES HOUSES, all as lately possessed by Messrs. LANDALE and BOYD, with a trifling alteration in the marches, and with the exception of some of the houses formerly occupied in connection with the colliery.

The coal field has been fitted up with MACHINERY and PLANT of an excellent description, and suitable for the field, and a tenant may take the machinery and plant at valuation, or pay interest on the value thereof, as may be arranged.

The coal in the adjoining lands has been wrought for many years, and proved to be of excellent quality, and that now to be let is expected to be equally good.

If desired, a FIELD OF LAND can be LET along with the coal field. For further information, application may be made to Messrs. DUNDAS and WILSON, C.E., 16, St. Andrew-square, Edinburgh; Messrs. J. and G. H. GEDDES, 9, Melville-crescent, Edinburgh; or to Mr. J. L. GOW, Rath, Kirkcaldy, who will give directions for showing the boundaries, and offers will be received up to the 30th July next.

TO BE LET, ON LEASE, for a term of years, SEVERAL ACRES OF LAND, suitable for MANUFACTURING PURPOSES, advantageously situated on the south bank of the River Tyne, about two miles below Newcastle-on-Tyne, and within a quarter of a mile from the North-Eastern Railway. There is a good quay frontage, with deep water. Apply to Mr. T. S. BARNWELL, King-street, Quay side, Newcastle-on-Tyne.

VALUABLE CORNISH MINING MACHINERY.

MESSRS. J. C. LANYON AND SON have FOR SALE a very superior lot of the above, including:—80, 70, 60, 50, and 24 inch PUMPING ENGINES; 24 inch ROTARY ENGINE, with CAPSTAN; 22 inch ditto, with CAPSTAN and CRUSHER; Several good BOILERS; A large assortment of PITWORK of all sizes; STRAPPING PLATES, rolled and fattened, all of which are secondhand, in good condition, and will be sold on very reasonable terms.

For particulars, apply to—LANYON AND SON, MERCHANTS, REDRUTH. Dated Redruth, Feb. 28, 1870.

IMPORTANT NOTICE.

TO MINE PROPRIETORS, AGENTS, AND ENGINEERS.

MESSRS. J. C. LANYON AND SON, of REDRUTH, CORNWALL, having PURCHASED the WHOLE of the PLANT of the CLIFFORD AMALGAMATED MINES, beg to call the attention of all parties requiring SECONDHAND ENGINES, BOILERS, PITWORK, or MINING MATERIALS of any description, to the unprecedentedly favourable opportunity thus afforded for supplying their wants on the most favourable terms. Communications to be addressed to—J. C. LANYON AND SON, REDRUTH, CORNWALL. July 4, 1870.

SECONDHAND MINING MACHINERY FOR SALE, IN FIRST-RATE CONDITION.

PUMPING ENGINES, of various sizes,—viz., 70 in., 60 in., 50 in., 40 in., 30 in. WINDING ENGINES, STAMPING ENGINES, STEAM CAPSTANS, and CRUSHERS of all descriptions, and all kinds of MATERIALS required for MINING PURPOSES.

TO BE SOLD, AT MODERATE PRICES.

For further particulars, apply to—MESSRS. HARVEY AND CO., ENGINEERS AND GENERAL MERCHANTS, HAYLE, CORNWALL, AND HAYLE FOUNDRY WHARF, NINE ELMS, LONDON, CITY OFFICES (GRESHAM HOUSE), 23, OLD BROAD STREET, MANUFACTURERS OF PUMPING and other LAND ENGINES and MARINE STEAM ENGINES of the largest kind in use, MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL. SHIPBUILDERS IN WOOD AND IRON.

THE PATENT PNEUMATIC STAMPS

May be SEEN AT WORK at HAYLE FOUNDRY WHARF, NINE ELMS, by previous application at either of the above addresses.

FOR SALE, a superior secondhand 25-horse power PORTABLE STEAM ENGINE, also a 16-horse power, both equal to new, and guaranteed.

FOR SALE, cheap, several first-class new PORTABLE STEAM ENGINES, 8 to 12-horse power, with all recent improvements. PIT WINDING GEAR made at a short notice, suitable for Portable Engines. FOR SALE, a secondhand PORTABLE ENGINE, with a MORTAR MILL. Apply to—BARROWS AND STEWART, ENGINEERS, DANBURY.

FOR SALE,—THE UNDERMENTIONED ENGINES:—

ONE 50 in. cylinder PUMPING ENGINE, with ONE BOILER. ONE 30 in. cylinder ROTARY STEAM ENGINE, 7 ft. stroke, with or without BOILER, wrought iron fly-wheel shaft, and 10 ton fly-wheel; 12 heads of stamps connected. ONE 30 in. cylinder PUMPING ENGINE, 9 ft. and 8 ft. stroke, with or without BOILER. ONE 12 in. cylinder ROTARY STEAM ENGINE, with ONE 6 ton BOILER. THREE Cornish BOILERS, from 10 to 12 tons each, in excellent condition. Also, several Cornish CRUSHERS, of various sizes. A 60 feet WATER WHEEL, with hammered iron round shaft, cast-iron sockets, rings, &c.

For further information, apply to—W. MATTHEWS, ENGINEER, TAVISTOCK. Tavistock, June 26th, 1870.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACT, 1862, and of the WHEAL POLMAR MINING COMPANY. —TENDERS, stating the highest price that will be given for a 30 in. cylinder ENGINE, 10 feet stroke, even beam, and TWO BOILERS, 10 tons each, now being on Wheal Polmar Mine, in the parish of St. Austell, within the Stannaries of Cornwall, will be RECEIVED by the Registrar of this Court at Truro, within the said Stannaries, on or before Thursday, the 28th day of July instant.

The above machinery can be seen on application to the Officer of the Court in possession thereof at the Mine, and further particulars obtained of—F. HEARLE COCK, Solicitor, Truro. Dated Registrar's Office, Truro, the 13th July, 1870.

NORTH STAFFORDSHIRE.

TO BE SOLD, BY AUCTION, pursuant to an Order of the High Court of Chancery, made in a Cause "Williamson v. Williamson," with the approbation of the Judge to whose Court the said Cause is attached, by Messrs. COOKSEY AND SON, the persons appointed to sell the same, at the North Stafford Hotel, Stoke-upon-Trent, in the county of Stafford, on Wednesday, the 29th day of July, 1870, at Three o'clock in the afternoon, in 17 or such other lots, and subject to such conditions, as shall be then declared, with the option of determining at the time of sale the order in which the lots shall be put up, the following VALUABLE PROPERTY, late belonging to HUGH HENSHALL WILLIAMSON, Esq., deceased, viz.:—

VALUABLE FREEHOLD AND LEASEHOLD ESTATES,

Consisting of FARMS and COLLIERIES, situate at PINNOX and CHELL, in the parishes of BURSLEM and WOLSTANTON, in the county of STAFFORD, comprising 47A. 0R. 12P. of FREEHOLD SURFACE LANDS, with the MINES and MINERALS thereunder; 26A. 0R. 5P. of FREEHOLD MINES, without surface, and the various SEAMS of COAL and IRONSTONE under; 53A. 1R. 27P. of LANDS adjoining the freehold estates, held under lease for a term of 40 years from the 24th day of June, 1866; together with the farm houses and farm buildings, managers' houses and offices, 100 workmen's dwellings, foundry, fitting shops, smiths' and carpenters' shops, winding and pumping engines, pit shafts, railways, and other colliery plant, erected, and being in and upon the said lands.

The mines include all the principal seams of coal and ironstone in the North Staffordshire coal field. The situation of the property is in close proximity to the towns of Burslem and Tunstall, and within a short distance of the Trent and Mersey Canal, and the main line of the North Staffordshire Railway, the intended branch of which to Tunstall and the Potteries Loop Line will pass through the property, and the company are under obligation to complete both these lines by the 5th July, 1872.

The collieries are traversed by a private locomotive railway, by which the produce of the mines is conveyed to a wharf adjoining the main street of the town of Tunstall. There is another wharf belonging to the estate at Brown Hills, on the Trent and Mersey Canal, from which coal and ironstone are forwarded in large quantities to South Staffordshire and other districts.

The estate affords convenient sites for the erection of blast-furnaces and iron works, and contains an ample supply of excellent ironstone, as well as coal suitable for the manufacture of iron.

Printed particulars and conditions of sale may be obtained gratis from Messrs. JOSEPH COOKSEY and SON, Auctioneers and Mining Engineers, West Bromwich; Mr. JOHN BUTTERFIELD, Hosston Mills, near Tunstall; ELIAS DORNING, Esq., C.E., 41, John Dalton-street, Manchester; JOHN LANCASTER, Esq., Ince Hall, Wigan, and Belton Grange, Rugby; Messrs. SLATER, HELLIS, and Co., Solicitors, Manchester; Messrs. BROCKBANK and HELDER, Solicitors, Whitehaven; Messrs. BLAKE and TRAFFORD, Solicitors, Northwich; Messrs. WEDKALE and LETTS, Solicitors, 3, Mure-court, Temple, London, E.C.; Messrs. KEARY and SON, Solicitors, Stoke-upon-Trent; and at the place of sale.

In Voluntary Liquidation under the Companies Act, 1862.

THE CAMBRIAN SLATE COMPANY (LIMITED).

TO BE SOLD, BY AUCTION, BY MR. T. W. HILL (by order of Mr. George Haswell, the Liquidator voluntarily appointed by the company), at the Wynnstay Arms Hotel, in Oswestry, on Friday, the 22d July, 1870, at Three o'clock in the afternoon, in One or more Lots, and subject to conditions, the LEASEHOLD and other BENEFICIAL INTEREST of the CAMBRIAN SLATE COMPANY (LIMITED), in the CAMBRIAN SLATE QUARRIES, comprising all the VALUABLE PRODUCTIVE and EXTENSIVE VEINS, BEDS, and STRATA of SLATES and FLAHS, known collectively as THE CAMBRIAN SLATE QUARRIES.

And in the offices, sheds, water supply, rights, easements, and interests thereto belonging, situate at CHWABEL UCHA, in the parish of LLANSAINST, FFRITH, GLYN CEIRIOG, in the county of DENBIGH. And also the WHOLE of the PLANT and MACHINERY, movable tools, and other effects, and the STOCK of SLATES on the ground—all the property of the company.

The Cambrian Slate Quarries have been opened for several years, have produced a large quantity of first-rate slates, and are capable of great development. They are situated about ten miles from Oswestry, and will be upon a branch of the authorised Ellesmere and Glyn Valley Railway, about to be constructed as a horse tramway under the provisions of a Bill now in Parliament, and by means of which tramway they will be placed in immediate connection with the Great Western Railway System, and the Shropshire Union Railways and Canals of the London and North-Western Railway Company. They are now approached by the turnpike-roads from Chirk and Oswestry, and highways from Llangollen and Fron Cysyllte.

The quarries, machinery, and plant are in full working order and condition, and may be inspected at any time upon application at the works.

The property is held under leases, originally for thirty years, containing provisions for renewal for a further term of thirty years, which leases may be inspected at the offices of the solicitors, and will be produced at the time of sale.

Printed particulars may be obtained on application at the offices of the company, Forcgate-street, Chester; or Messrs. LONGEVILLE, JONES, and WILLIAMS, solicitors, at each of which places maps of the property may be inspected, and all necessary further information obtained.

GLAMORGANSHIRE, SOUTH WALES, NEAR ABERDARE AND MERTHYR TYDVIL.

VALUABLE MINERAL PROPERTY, also a QUANTITY OF VALUABLE PLANT, and a LARGE STOCK OF IRONSTONE, &c.

TO BE SOLD, BY PRIVATE CONTRACT, THE PENRHW MINE WORKS, Situate between the GLYN NEATH and HIRWAIN STATIONS on the VALE OF NEATH RAILWAY.

This property comprises about 600 acres of land, exclusive of about 250 acres on Hirwain Common, about to be allotted.

Term unexpired about 44 years. Surface rent, £170 per annum. Mineral deced rent, £100 per annum.

Portions of the surface have been sub-let at rents about £75 per annum in excess of the surface ground rent.

The royalties payable are—on ironstone, 8d. per ton; coal, 6d. per ton; small coal, 3d. per ton; fire-clay, 4d. per ton; building stone, 2d. per ton.

The Vale of Neath Railway runs through the property, and there is a commodious siding for the use of the works.

About 100,000 tons of ironstone have been raised, and it is of excellent quality; and it is estimated that 50,000 tons of ironstone per annum might be conveniently raised during the unexpired term.

The workings are by level, and on the crop of the beds, and the ironstone is raised at a low cost.

The leases contain full powers for the establishment of iron or steel works, blast-furnaces, rolling-mills, &c.

The situation is well adapted for such purposes. On the northern side the River Neath forms the boundary, with abundant supply of water; limestone is close at hand. The communication is convenient by railway and canal to the various ports of Swansea, Briton Ferry, and Neath, and by railway (broad and narrow gauge) in all directions.

The position and the facilities of transit make this property, whether regarded as a ready source for large supply of the best argillaceous ironstone to existing iron works, or as a site for the erection of iron and steel works, most deserving the attention of ironmasters and capitalists.

This property is in good working order, and there is a considerable amount of ironstone on bank, which may be taken by a purchaser. Also, THE GLYNBONT WORKS AND COLLIERY, Situate at GLYN NEATH, on the VALE OF NEATH RAILWAY.

This property consists of minerals under about 640 acres of land (a large extension of which may be easily arranged), together with powers of using the surface for working the minerals, and is held for an unexpired term of about 44 years.

Dead rent, £250 per annum. Royalties—coal, 6d. per ton; small or brush coal, and culm, sand, and building stone, 3d.; ironstone, 8d.; fire-clay, 6d. Surface rent, 10s. per acre, except where taken for houses, for which the price is £10 per acre.

The sidings at the Glyn Neath Station are the property of the vendors, and are of most substantial character. The situation, on account of the formation and extent of the ground, the abundant supply of water, and the inexhaustible supply of minerals and facilities of transit, is admirably adapted for the erection of blast-furnaces, iron or steel millstone a large scale, and forms one of the finest sites in the county for the purpose.

The vendors have also 21 broad-gauge wagons to dispose of, also a quantity of plant other than that used on the Penrhw and Glynbont Works, and they are willing to dispose of such last-mentioned plant, or the wagons, or the ironstone in parcels to suit the convenience of buyers.

For further particulars and reports apply to DAVID JOSEPH, Esq., Rockleaze, Durham Down, Bristol; or to Messrs. UPTON, JOHNSON, UPTON and BUDD, 20 Abchurch-lane, London, solicitors. Dated June 18, 1870.

GREAT NORTH DOWNS MINE.

TO MINE AGENTS.

CLEARING SALE.—CAPT. RICH, SCORRIER, CORNWALL, has FOR SALE a number of 18, 19, and 19½ in. PUMPS; WINDBOILERS from 17 to 20 inches; 18 in. PLUNGER POLES, complete; large working barrel; main rods; hammered iron red plates, 9 to 7 in. wide, over 20 ft. long; 120 ft. best iron bucket rods, 2½ in. diameter; balance bob; 250 fms. wire rope; two first-rate capstan ropes, over 200 fms. long, 14 and 15 in. diameter; pulleys from 2 to 12 ft. long; several tons of standards and glands; 12 in. rod pins; miners' dry; drop screws; smiths' bellows; anvils; screwing tools; small lathe; and BOILER, about 10 tons.

The whole of the materials are in good condition, and must be sold forthwith.

Under the Bankruptcy Act, 1869.

RE HOLYWELL TIN PLATE WORKS COMPANY, HOLYWELL, FLINTSHIRE.

MESSRS. WHEATLEY KIRK AND PRICE are honoured with instructions from the Trustee herein TO SELL, BY AUCTION, on Wednesday and Thursday, July 20th and 21st instant, at Twelve o'clock noon, prompt, all the NEARLY NEW and modern PLANT, STEAM ENGINES, BOILERS, PLATE MILLS, FURNACES, TANNING MACHINES, UTENSILS, FIXTURES, and apparatus, and a large assemblage of miscellaneous effects, further particulars of which will be given in catalogues, which may be had of the Auctioneers, 35, Princess-street, Manchester; or JAMES CARTWRIGHT, Esq., Solicitor, Chester.

By order of the London and North-Western Railway Company, the EXCEEDINGLY VALUABLE and WELL KNOWN PLANT, MACHINERY, &c., until lately used for working the trains in the tunnel from Edge Hill to Lime-street, Liverpool, and vice versa, two independent pair of high-class WINDING ENGINES, cylinders 25¼ in. bore, by 6 ft. stroke, winding machinery, main wheel 20 ft. diameter, chains, rails, pulleys, capstan, and fittings; bogie frame, with tightening pulley, balance box; about 2340 fms. of cased hempen rope, 8½ in. circumference, new in 1869, and not much used since; together with other miscellaneous and valuable effects.

MESSRS. WHEATLEY KIRK AND PRICE are honoured with instructions from the directors of the London and North-Western Railway Company TO SELL, BY AUCTION, on Wednesday, the 27th July, 1870, at Twelve o'clock noon, prompt, all the EXCEEDINGLY VALUABLE STEAM ENGINES, PLANT, and MACHINERY, an outline of which is given above.

Full and detailed particulars, in catalogues, which may be had of the Auctioneers, at their offices, 35, Princess-street, Manchester.

N.B.—All the winding apparatus, pulleys, rope, chains, underground shafting, wheels and supports underground and in tunnel, will be removed and loaded into trucks by the London and North-Western Railway Company free of expense to the purchaser.

FOREST OF DEAN, GLOUCESTERSHIRE.

HIGHLY IMPORTANT AND VERY VALUABLE IRON MINE.

MESSRS. CADLE AND BUBB have received instructions from the Executor of the late Wm. BLANCH, TO SELL, BY AUCTION, at the Mart, Tokenhouse-yard, London, on Tuesday, the 2d day of August, 1870, at Three o'clock in the afternoon, all that EXTENSIVE FREEHOLD MINERAL PROPERTY, comprising an area of upwards of FOUR HUNDRED ACRES, and containing an abundant supply of HEMATITE IRON ORE, and known as the SOUTH WALES IRON MINE.

Situate near the western outcrop of the Forest of Dean Mineral Basin, about two miles from the town of COLEFORD, and one and a half mile from the iron works and mineral railway station at Parkend, and six miles from the shipping port and railway station at Lydney.

Plans of the property may be seen at the MINING JOURNAL Office, 26, Fleet-street, London, E.C.; and at the Auctioneers' offices, 51, Chancery-lane, W.C., and Clarence-street, Gloucester; and plans and particulars may be had on application to Messrs. J. and P. BLANCH, Colliery Proprietors, Birch Hill, Coleford, Gloucestershire.

By order of the Trustees of the late Mr. Peter Littler.

TO LAND OWNERS, COAL OWNERS, COLLIERY PROPRIETORS, AND OTHERS.

VALUABLE FREEHOLD PROPERTY AT PARR, near ST. HELEN'S, with the mines and beds of COAL thereunder.

MR. WM. BIRCHALL WILL SELL, BY AUCTION, on Thursday, the 28th day of July, 1870, at half-past Five for Six o'clock in the afternoon, at the Raven Hotel, in St. Helen's, in the county of Lancashire, subject to conditions to be then produced, and in one or several lots, all that PRICE OF LAND, with the MESSAGE or DWELLING HOUSE, SHIPON, OUTBUILDINGS, and SIX COTTAGES thereon erected, situated at Parr Flats, near St. Helen's, in the county of Lancashire, belonging to the Trustees of the said Peter Littler, bounded on the western side by land belonging to the executors of the late Hy. Tickle, on the northern and eastern sides by land lately belonging to Mrs. Makin (deceased), and on the southern side by the high road leading from St. Helen's to Warrington, and containing in the whole upwards of four acres of land.

The land is supposed to contain the following MINES of COAL—viz.: Lion's Delfs, 2 ft. 6 in.; London's Delfs, 2 ft.; Potato Delfs, 6 ft.; Bartha Delfs, 2 ft. 3 in.; Little Delfs, 2 ft. 3 in.; Maria Delfs, 6 ft.; and Bottom Delfs, 6 ft. The mines of coal on this land have never yet been worked, and the property is sold together with all mines and rights of mining and getting coal or other minerals thereunder.

The dwelling house and outbuildings, and the six cottages, produce an aggregate yearly rent of £65.

For further particulars, apply to the Auctioneer; and to Messrs. STONE and BARTLEY, Solicitors, Adelphi Bank-chambers, South John-street, Liverpool.

In Chancery.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867, AND IN THE MATTER OF THE GLYN NEATH STEAM COAL AND IRON COMPANY (LIMITED).

VALUABLE AND IMPORTANT COLLIERY AND IRON MINES,

In the heart of the rich coal fields of SOUTH WALES, about 30 miles from Cardiff and 12 miles from Neath, intersected by the Vale of Neath Railway, and in immediate contiguity to numerous extensive Blast Furnaces, comprising—

THE GLYN NEATH COAL AND IRON ORE MINES,

Extending under an area of about 1,000 acres, leased for terms of 60 and 24 years respectively, at very moderate dead rents and royalties, and containing very valuable seams of STEAM COAL and ARGILLACEOUS IRON ORE, with the extensive PLANT in thorough working order, including many miles of railway, &c.

MESSRS. EDWIN FOX AND BOUSFIELD WILL SELL, BY AUCTION, early in the month of August next, the above-mentioned PROPERTY, in One Lot.

More descriptive advertisements will appear, and particulars and conditions of sale are being prepared, and may be had (gratis), when ready, of ARTHUR COOPER, Esq., the Liquidator, 13, George-street, Mansion House; of Messrs. COOPER, JOHNSON, UPTON, and BUDD, 20, Abchurch-lane; at the colliery, Neath; Messrs. OGLESBY and DAVIES, Cardiff; and of Messrs. FOX and BOUSFIELD, 24, Gresham-street, Bank, E.C.

WARWICKSHIRE.

In the NORTHERN DIVISION of the COUNTY, within three miles of NUNEATON, and four from Atherstone, a highly valuable surface ESTATE, of 478 acres, well timbered, and offering numerous sites for the erection of residences, together with the valuable MINERALS under certain portions of the Manors of Stockingford and Nuneaton.

MESSRS. COOKES AND SONS have received instructions to OFFER FOR SALE, BY AUCTION, at the Newdegate Arms Hotel, Nuneaton, on Friday, the 19th day of August, at Three for Four p.m. punctually, in Five Lots, all that

VALUABLE FREEHOLD ESTATE OF ANSLEY,

Comprising four considerable FARMS, with other smaller holdings, all let to good and substantial tenants at moderate rents; as also the MINERALS under the lands, offering a first-rate opportunity for the formation of large collieries.

This coal field is the nearest to the metropolis, and is now being rapidly opened up by the neighbouring proprietors.

The greater portion of the property is beautifully timbered, and several of the lots are of an undulating character, commanding fine views of the neighbourhood, and are well adapted for residential purposes.

The bulk of the estate has been thoroughly drained under Government inspection, and all the holdings have excellent homesteads, some of which have recently been erected on the best principles, and the whole of the property is well farmed, and in thorough order.

The estate is situate from 1½ to 4 miles west of Nuneaton. A first-class station on the London and North-Western Railway, and the Stockingford Station, on the Midland, is in immediate proximity to one of the farms.

Plans and particulars, with any further information, may be had from Messrs. HUNTER, GWATKIN, and HUNTER, solicitors, 9, New-square, Lincoln's-Inn, London; JOHN THOMSON, Esq., Badminton, Clippenham; Messrs. GIBB-WOOD, 119, Pall Mall, London; and at the auctioneers, at the Midland Counties Estate and Land Agency Offices, 32, Warwick-street, Leamington.

TO CAPITALISTS.

TO BE SOLD, BY PUBLIC ROUP, within the Hall of the Faculty of Procurators, St. George's-place, Glasgow, upon Wednesday, the 3rd day of August, 1870, at Two o'clock in the afternoon, ALL and WHOLE the RIGHT and INTEREST of the GREAT NORTHERN MINING COMPANY OF IRELAND in the MINES known as the ANAGLOUGH MINE, the GLEN MINE, the TATTOOTRA MINE, and the TASSAN MINE, situated in the counties of Monaghan and Armagh, together with the ERECTIONS, MACHINERY, APPARATUS, and UTENSILS belonging to and connected with the said Mines.

The Leases of these Mines have respectively the following periods still to run viz.:—ANAGLOUGH MINE 13 years. GLEN MINE 24 years. TATTOOTRA MINE 16 years. TASSAN MINE 13 years.

The Mines are principally of Lead, but the leases grant the right to work the other Metals and Minerals in the lands.

The royalties payable under the leases are very moderate. The Mines are situated in the midst of a rich mineral district, with great facilities for the conveyance of their produce by railway to shipping ports, and they have been surveyed and favourably reported upon by eminent Mining Engineers.

For further particulars, apply to Messrs. MACROBY and Co., Solicitors, 48, Rutland-square, Dublin, and Ulster Chambers, Belfast; JAMES WHEATLEY KIRK, Esq., 154, St. Vincent-street, Glasgow; or Messrs. M. GRIGOR, STEVENSON, and FLINKE, Writers, 130, St. Vincent-street, Glasgow, in whose hands are the various Leases and the Articles of Roup.

FOR SALE, a MONMOUTHSHIRE COLLIERY, worked by LEVEL. The coal is adapted for domestic, gas, and manufacturing purposes, and the coke manufactured therefrom is greatly esteemed in the manufacture of Tin Plates.

The colliery is in direct communication with all the railways. For particulars, apply to DONSON, BROWS, and ADAMS, Mining Engineers, Cardiff.

**BICKFORD'S PATENT
FOR CONVEYING
CHARGE IN****SAFETY FUSE,
FIRE TO THE
BLASTING ROCKS, &c.**

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXHIBITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; and at the "GREAT INDUSTRIAL EXHIBITION," at Altona, in 1869.



BICKFORD, SMITH, AND CO.,
of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL OF FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

THE CORNWALL BLASTING POWDER COMPANY

ST. ALLEN MILLS, TRURO,
Beg to call attention to their WARRANTED WATERPROOF SAFETY BLASTING CARTRIDGES, adapted for SUBMARINE BLASTING and USE IN WET GROUND GENERALLY.

G. COPELAND, JUN.,
MANUFACTURER OF THE IMPROVED

PATENT SAFETY BLASTING CARTRIDGE

FOR DRY OR WET GROUND;
ALSO OF THE

EMPTY CARTRIDGE CASES, IN SIZES TO ORDER.
ADDRESS,—CONSTANTINE, NEAR PENRYN.

MACHINERY FOR MINES AND SLATE QUARRIES

SAWING, PLANING, DRESSING, AND ROCK-BORING MACHINES
FOR SLATE.

WATER BALANCES, WATER WHEELS, WINDING AND PUMPING MACHINERY; and PLANT of every description for MINES or QUARRIES.

STEAM ENGINES—STATIONARY, MARINE, or LOCOMOTIVE.
BOILERS AND GIRDER WORK.

SHAFTING, PULLEYS, AND GENERAL MILLWORK.

MACHINERY AND GENERAL CASTINGS.

SPUR and BEVEL WHEELS of any diameter or pitch moulded by machinery.
DE WINTON AND CO.,

UNION IRON WORKS, CARNARVON.

**ENGINE COVERS—TARPAULINS—AIR SHAFTING
FOR MINES.**

THE BEST DESCRIPTIONS, and as SUPPLIED to the
LARGEST FIRMS, can be obtained at—
BENJAMIN EDGINGTON'S,
2, DUKE STREET, LONDON BRIDGE, S.E.

JOHN HORSLEY,
IRON AND METAL AGENT,

ST. ANN'S SQUARE, MANCHESTER.

PERMANENT, CONTRACTORS, and COLLIERY RAILS, in STEEL or IRON.
Wrought-iron or Steel Weldless Locomotive Carriage and Wagon Tyres.
Iron and Steel Straight and Cranked Axles, Wheels and Axles, Railway Chairs,
Fish Plates, Bolts and Nuts, Spikes, Cranes, Jacks, Rivets, Hurdies,
and Chains.

Black or Galvanised Telegraph Wires, Fencing Wire.

BLACK, OILED, and GALVANISED CORRUGATED SHEETS.

Rolled Iron Joints, Wrought-iron Girders, Roofs, Bridges, Tanks, Boilers, &c.

Boat Girder, Tank Bridge and Boiler Plates.

Angle, Tee, and Girder Iron.—Nail Rods, Tin Plates, Hoops, Sheets, Lead, Copper, Tin, Zinc, and Spelter.

Hot and Cold Blast Pig Iron, &c., &c.

JAMES BUTTERWORTH,

MAKER OF ALL THE VARIOUS SIZES OF

**VERTICAL AND HORIZONTAL HIGH-PRESSURE STEAM
ENGINES.**

VERTICAL ENGINES, from 2 to 10-horse power,

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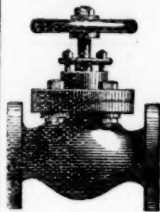
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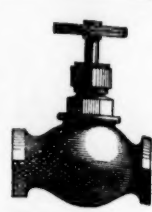
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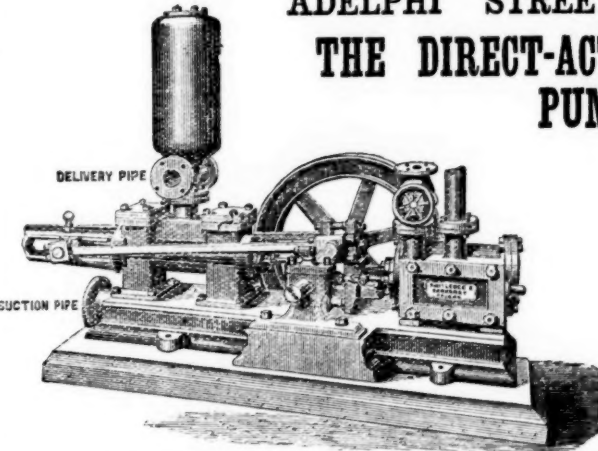
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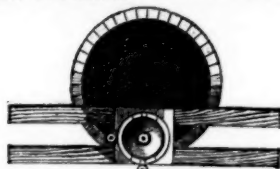
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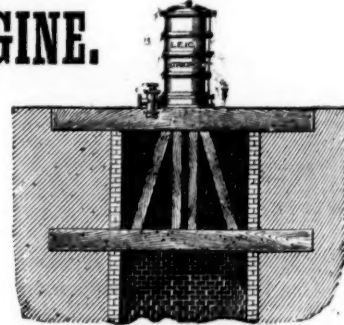
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Fig. 144.—Vertical Engine, all sizes, from 2 to 20-horse power.
Fig. 146.—Horizontal Engine, from 4 to 100-horse power.
Fig. 142.—Portable Engine, from 2½ to 30-horse power.
Fig. 40.—Gwynne and Co.'s Combined Stationary Pumping Engine.
Fig. 139.—Turbine Water-wheel, from 1 to 300-horse power.

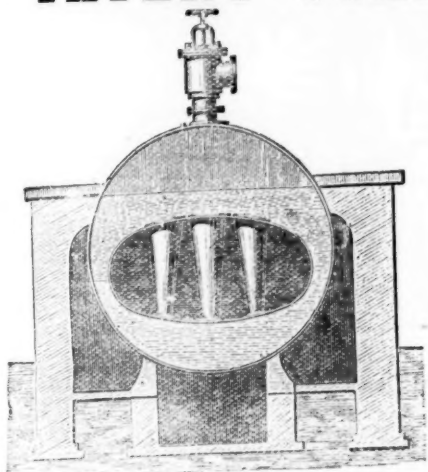
Fig. 22.—Combined Pumping Engine, all sizes, obtained Prize Medal, Paris Exhibition.
Fig. 85.—Deep Well Pumping Engine, all sizes.
Fig. 134.—Water-wheel Pumping Machinery.
Fig. 36.—Gwynne and Co.'s Patent Syphon Drainage Machinery.
Fig. 95.—Horse-power Pumping Machinery.

Fig. 86.—Chain Pump Pumping Engine.
Fig. 48.—Deep Mine Centrifugal Pumping Machinery.
Fig. 84.—Double-acting Vertical Pumping Engine.
Fig. 106.—Gwynne and Co.'s Improved Plunger Hand Pump.
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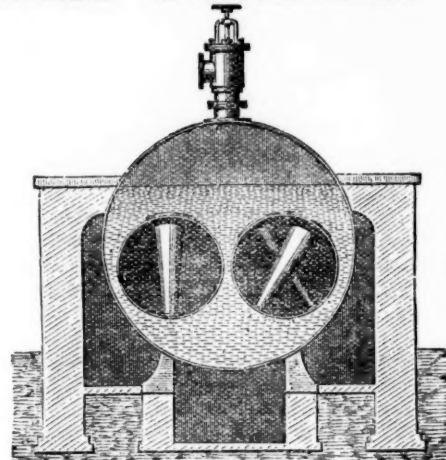
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